SIEMENS

SIREMOBIL

SP

System Manual

Installation and Setting Instructions

DICOM Bridge

Document revision level

Chapter	Page	Revision
0	all	05
1	all	05
2	all	05
3	all	05
4	all	05
5	all	05
6	all	05
7	all	05
8	all	05

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Please contact your local Siemens office to order current revision levels.

Disclaimer

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Note on patient images

⚠**WARNING**	**Loss of all patient images!**

The hard disk must be erased completely during the startup of the DICOM Bridge.

Before the hard disk is erased, inform the customer that after the startup all patient images (including the write-protected patient images) are deleted and no longer available.

If a Memoskop with MOD drive is available, the still required patient images can be saved onto MOD.

If a Multispot camera or laser camera is available, the still required patient images can be exposed onto film.

Safety note

⚠**WARNING**	**Avoiding minor to severe physical injuries - which can lead to death and avoiding material damage.**

The product-specific safety notes stated in the system folder and the safety notes stated in ARTD Part 2 must be complied with. After conclusion of all work and after attachment of all covers perform the protective ground wire test according to ARTD-002.731.17. The protective ground wire resistance must not exceed 0.2 ohms.
Checks or settings which must be performed with X-ray radiation switched on are marked by the radiation symbol ⚠.
Radiation protection clothing must be worn when performing operations thus marked.

Prerequisite

NOTE	**These instructions apply to the installation, start-up and service of a DICOM Bridge in a SIREMOBIL Compact, SIREMOBIL Iso-C, POWERMOBIL or ARCOSKOP.**

The required customer-specific cross-reference data is identified in the Pre-installation Checklist as well as in these instructions by [xx], where xx stands for the respective cross reference number. Transfer the data from the cross-referenced fields into the input mask.
The descriptions and illustrations were created with the operating system WINDOWS 95 and software versions current at the time of printing. When using a different operating system or more recent software versions, the illustrations, sequences and software versions can differ slightly.

- Help provided by a second person for a short time would be useful (see Chapter 2)

Required documents

Dependent on the existing System:

SIREMOBIL Compact - Circuit diagram	G5429
SIREMOBIL Compact - Log book	SPR2-130.066.01...
or	
SIREMOBIL Iso-C - Circuit diagram	G5464
SIREMOBIL Iso-C - Log book	SPR2-230.066.01...
or	
POWERMOBIL - Circuit diagram	G5481
POWERMOBIL - System manual	SPR2-240.802.01...
or	
ARCOSKOP - Circuit diagram	G5484
ARCOSKOP - System manual	SPR2-250.802.01...

Required tools and measurement devices

NOTE	**All tools and measuring instruments with the exception of those marked with "*" are listed with their specifications in the STC (Service Tool Catalog).**

Standard service kit *	
1 set of Allen keys *	
DMM	(e.g. Fluke 8060A part no. 97 02 101 Y4290)
Oscilloscope >50MHz	(e.g. Tektronix 2232 part no. 97 02 234 Y3155)
Service PC Windows 95 operating system and CD-ROM drive.*	
Service software *	
Service PC - Host connection cable	(e.g. part no. 99 00 440 RE999)
Protective conductor meter or Bender-Safety tester	(e.g. "Safety Tester Bender UNIMET 1000 ST", part no. 51 38 727)
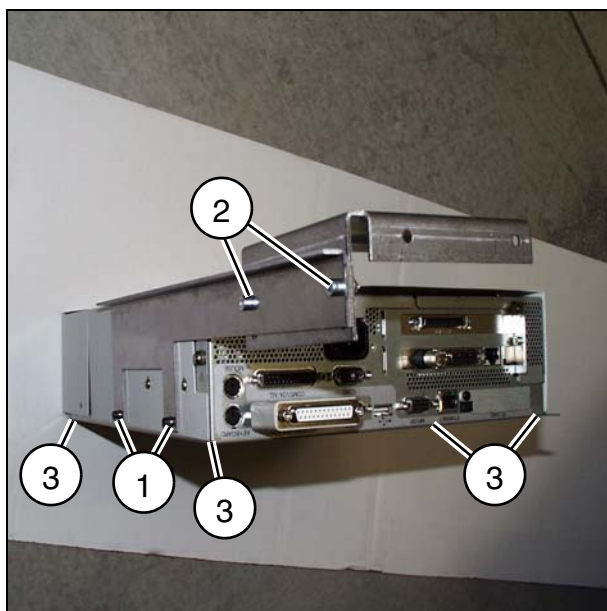
Fig. 1

⚠ **WARNING**	**Danger due to electric shock!**
	If not observed, death or serious physical injury can occur.
	Disconnect the system from the mains power prior to beginning
	this procedure!

Installing the DICOM Bridge

- Depending on other video components already installed in the monitor trolley, the DICOM Bridge should be installed as follows:

  - without optional video components   in the video printer compartment

  - with an existing Multispot camera   in the video printer compartment

  - with an existing video printer   in the Multispot camera compartment above the video printer compartment

  - with an existing video printer and Multiformat camera or video recorder   in the video printer compartment above the video printer

Installation on the video printer

- The accessory pack includes 4 self-adhesive rubber mounting feet which must be affixed on the lower side of the DICOM Bridge, on the respective corners (3/Fig. 1).

- Attach the mounting bracket (1/ Fig. 1) on the DICOM Bridge, using the M 3 x 10 mm screws and lock washers attached.
  Pay attention to good contact of the cover of the DICOM Bridge to the DICOM Bridge (Fig. 1).

- Attach the 2nd mounting bracket with the screws as shown in (2/Fig. 1).
  Help provided by a second person for a short time is useful.

- Remove video printer to the front and hold.
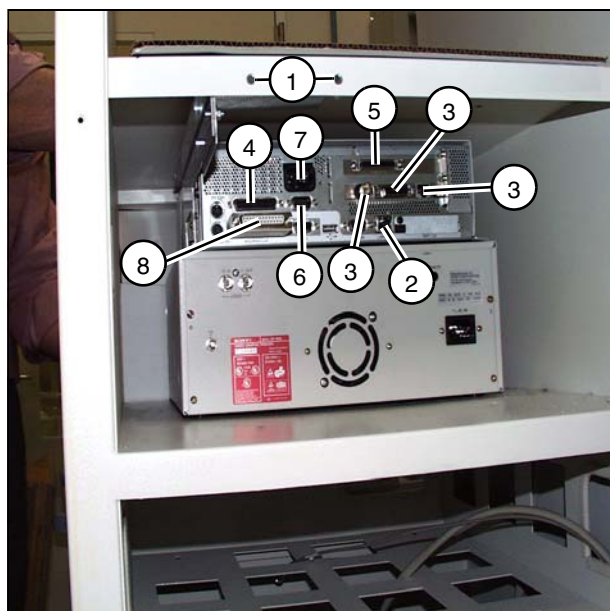
Fig. 2

Fig. 3

- The 2nd person should push the DICOM Bridge from the rear of the monitor trolley into the video printer compartment and lift the DICOM Bridge above the video printer. Stands on the video printer (Fig. 2).

- Push the video printer back into the compartment under the DICOM Bridge.

- Attach the mounting bracket of the DICOM Bridge with the screws in the two mounting holes (Fig. 2). Tighten all screws on the mounting bracket.

Installation in the compartment of the video printer or multiformat camera

- Attach the two mounting brackets (in accessory pack, Fig. 3) with screws laterally on the DICOM Bridge. For this purpose, loosen the cover screws and reattach together with mounting brackets.

- Use the two appropriate diagonal holes in the respective compartment. Remove the blind plates of the holes. Attach the DICOM Bridge using the enclosed screws, washers, locking rings and nuts.

Additional protective conductor at the DICOM Bridge

- Route the protective conductor included with the DICOM Bridge from the DICOM Bridge to the protective conductor terminal strip (yel/grn) of the switch-on module. Attach it to the DICOM Bridge with the screws and clamp the other end in one of the terminals of the protective conductor terminal strip.

Power cable

- Route the power cable from the DICOM Bridge to terminal strip X2 in the left compartment of the monitor trolley (viewed from the back).

- Attach the protective conductor to the protective conductor terminal strip (yel/grn).

- Attach the power cables to X2.1 and X2.2 of the terminal strip.

- Insert the power plug into socket (7/Fig. 2).

Serial interface cable

- Remove the keyboard plug on the Memoskop.

- Connect the Y-cable to the keyboard jack of the Memoskop.

- Connect the keyboard plug to the Y-cable.

- Route the other end of the cable to the DICOM Bridge in the right compartment of the monitor trolley (viewed from the back) and connect it to serial port COM1/V24 (4/Fig. 2).

SCSI cable

- Route the SCSI cable from the DICOM Bridge to the MEMOSKOP in the right compartment of the monitor trolley (viewed from the back).

- Remove the SCSI termination plug on the MEMOSKOP.

- Connect one end of the cable to the MEMOSKOP SCSI output and the other end to the SCSI jack on the DICOM Bridge (5/Fig. 2).

- Secure all cables with cable ties.

Dongle

- Connect the supplied dongle to the socket "LPT1/PR INTER" and tighten (8/Fig. 2).

Connection plate

- Remove the blind plate on the cover of the LOG book compartment.

- Pull the cables from the connection plate through the cutout.

NOTE	**Do not use the Ethernet socket (2/Fig. 2)!** **Connect the cables of the socket plate to the sockets (3/Fig. 2)!**

- Route the cables to the DICOM Bridge in the right compartment of the monitor trolley (viewed from the back) and connect them to the connectors on the network card. Make sure that the connectors lock into place.

- Secure the connection plate with the existing screws.

MEMOSKOP configuration

- Switch on system.

- Call up the Technical Setup menu.

- Select the Diagnostics menu. Then select the "Enable Bridge" line and set it to "Yes."

- Select the "More selections" menu.

- Select the menu "Memoskop serial number" or "Unit serial number" and enter the serial number of the Memoskop.

- End of the Technical Setup.

Prerequisites

NOTE	Observe the following restrictions!

Systems with older software versions

- With existing system

  SIREMOBIL Compact up to serial number   03890

  SIREMOBIL Compact L up to serial number 01255

  SIREMOBIL Iso-C up to serial number   01588

  use the memoskop and host software floppy disks from the "DICOM Get Worklist" Upgrade Package and perform the following work up to and including the "Testing the Memoskop" section.

- With existing system

  POWERMOBIL up to serial number   01085

  ARCOSKOP up to serial number   01032

  use the memoskop fast software floppy disks from the "DICOM Get Worklist" Upgrade Package and perform the work starting with the "Saving the patient images" section.

Systeme with new Software Versions

- In the case of the

  SIREMOBIL Compact with serial number $\geq$ 03891

  SIREMOBIL Compact L with serial number $\geq$ 01256

  SIREMOBIL Iso-C with serial number $\geq$ 01589

  POWERMOBIL with serial number $\geq$ 01086

  ARCOSKOP with serial number $\geq$ 01033

  perform the installation of the pcAnywhere program as next work step.

Flowcharts

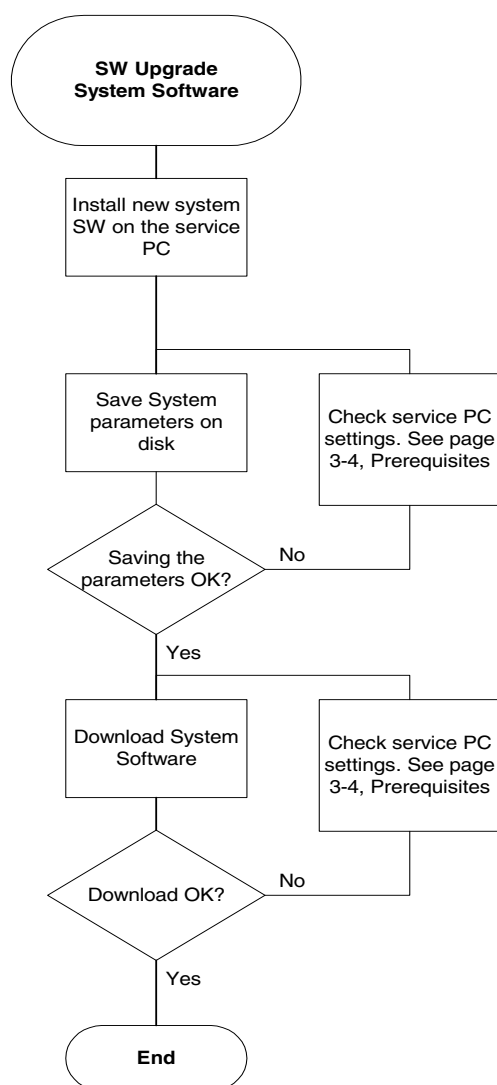### System Software upgrade flowchart

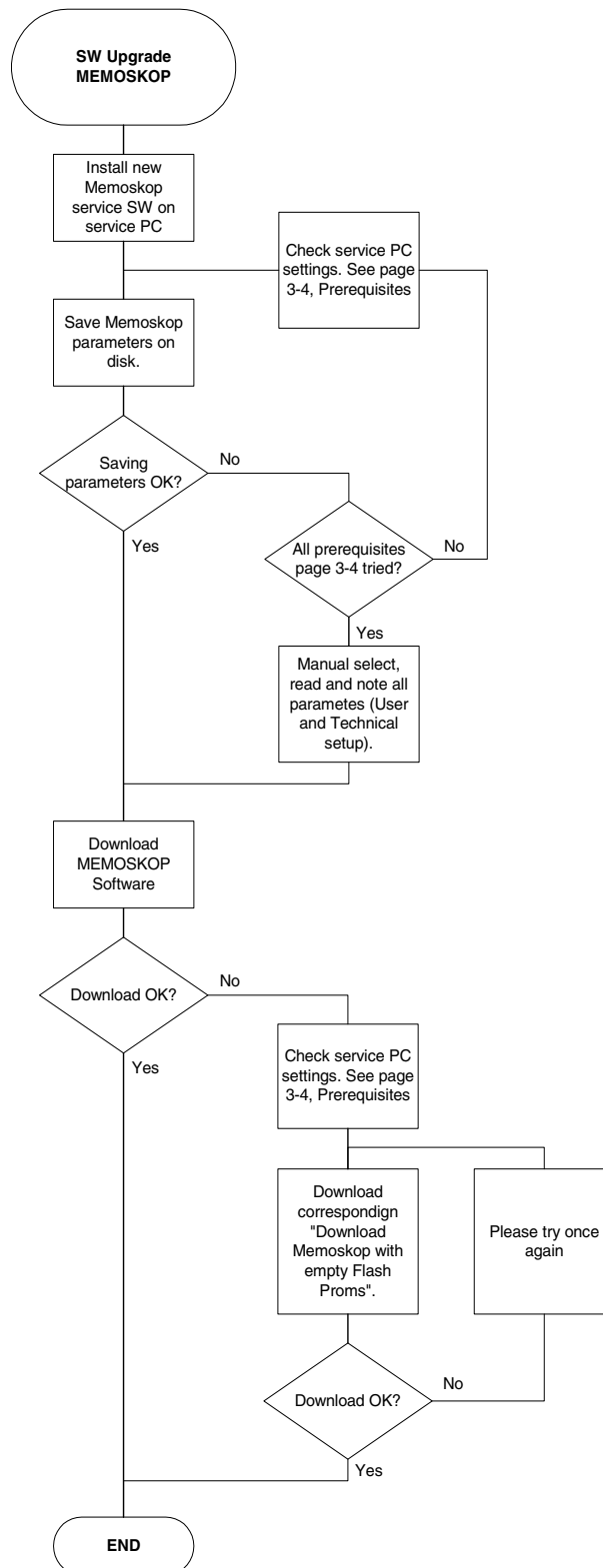| NOTE	**With existing POWERMOBIL or ARCOSKOP systems, the system software must not be downloaded.**
	Continue with section MEMOSKOP software upgrade flow chart.

The system software upgrade flowchart shows only the main working steps. Please follow the flowchart path in case of problems during the SW upgrade.

MEMOSKOP Software upgrade flowchart

The MEMOSKOP software upgrade flowchart shows only the main working steps.
Please follow the flowchart in case of problems during the SW upgrade.

```
        ┌─────────────────┐
        │  SW Upgrade     │
        │  MEMOSKOP       │
        └────────┬────────┘
                 │
        ┌────────┴────────┐
        │ Install new     │
        │ Memoskop        │           ┌──────────────────┐
        │ service SW on   │           │ Check service PC │
        │ service PC      │           │ settings. See    │
        └────────┬────────┘           │ page 3-4,        │
                 │                     │ Prerequisites    │
        ┌────────┴────────┐           └──────────────────┘
        │ Save Memoskop   │
        │ parameters on   │
        │ disk.           │
        └────────┬────────┘
                 │
            ╱ Saving ╲  No
           ╱ parameters ╲────────┐
           ╲   OK?    ╱          │
            ╲       ╱       ╱ All prerequisites ╲  No
             Yes            ╲ page 3-4 tried?  ╱────┐
                             ╲              ╱       │
                                 Yes               │
                          ┌──────────────┐         │
                          │ Manual select│         │
                          │ read and note│         │
                          │ all parametes│         │
                          │ (User and    │         │
                          │ Technical    │         │
                          │ setup).      │         │
                          └──────────────┘
        ┌────────┴────────┐
        │ Download        │
        │ MEMOSKOP        │
        │ Software        │
        └────────┬────────┘
            ╱ Download ╲  No
            ╲  OK?    ╱──────┐
             ╲      ╱        │
             Yes      ┌──────────────────┐
                      │ Check service PC │
                      │ settings. See    │
                      │ page 3-4,        │
                      │ Prerequisites    │
                      └──────────────────┘
                ┌──────────────┐   ┌──────────────┐
                │ Download     │   │ Please try   │
                │ correspondign│   │ once again   │
                │ "Download    │   └──────────────┘
                │ Memoskop with│
                │ empty Flash  │
                │ Proms".      │
                └──────────────┘
                   ╱ Download ╲  No
                   ╲  OK?    ╱────┐
                    Yes
        ┌────────┴────────┐
        │      END        │
        └─────────────────┘
```

Software upgrade

NOTE	Perform the following work up to and including the "Testing the Memoskop" section only with installed systems with the corresponding serial numbers. Refer to the "Prerequisites" section in this chapter.

Prerequisites

NOTE	Please observe PC settings!

Please observe the following points before starting the SW upgrade:
- The serial cable used must be completely wired and in order.
- The screensaver and all programs running in the background must be deactivated on the service PC.
- Check jumpers D1.X95 / D1.D96 / D1.X 99. They should be in position 2-3.
- Check the settings of the serial interface used on your service PC.
  SIREMOBIL Compact / Compact L or SIREMOBIL Iso-C
  Host service software: Activate the FIFO settings (default setting).
  Memoskop service software: Activate the FIFO settings (default settings).
  POWERMOBIL or ARCOSKOP:
  Host service software: Activate the FIFO settings (default settings).
  Memoskop FAST service software : Deactivate the FIFO settings.
- In case of correct communication with the host, but faulty communication with the Memoskop, temporarily set switch D1. S3.2 to the ON position.
  After restarting the Memoskop service program, ignore the "No communication with the X-ray system" error message and press the "Ignore" button.
  Then select the installed Memoskop type and start the necessary service work for the Memoskop.
  After completing the Memoskop service work, set switch D1.S3.2 back to the OFF position.
- Do not use the incompatible service PC "SCENIC MOBILE 350".

Installation of the system service software on the service PC

NOTE	Before installation or use of the system or Memoskop service software, the write protection of the corresponding parameter disk must be deactivated.

NOTE	With existing POWERMOBIL or ARCOSKOP systems, only the Memoskop service software has to be be installed on the service PC.

- Install the Memoskop service software (3 floppy disks, material number 3099715 G5437) on the service PC.

- If a SIREMOBIL Compact / L system is in use, install the system software (material number 3099731 G5437) on the service PC.

- If a SIREMOBIL Iso-C system is in use, install the system software (material no. 2829955 G5464) on the service PC.

Preparations

- Open the rear cover of the monitor cart (necessary for installation of the Memoskop software).

Saving the system parameters on disk

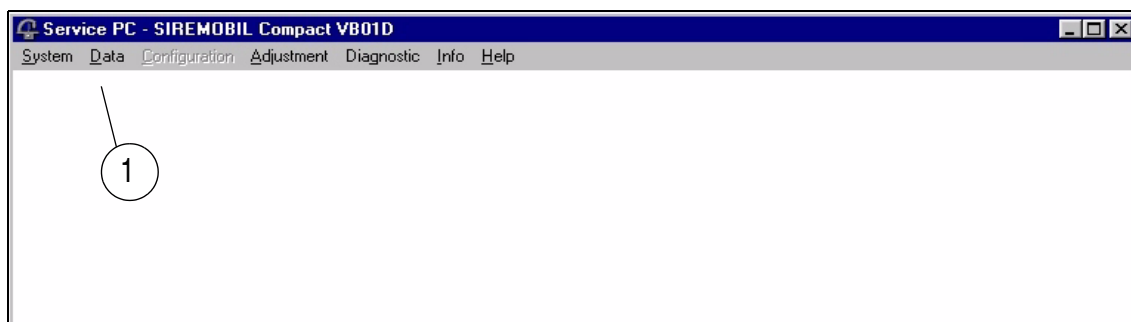| NOTE	**With existing POWERMOBIL or ARCOSKOP systems, skip this section.**
	Continue with section Saving the patient images.

Fig. 1

- Connect the service PC to the serial interface of the SIREMOBIL.

- Insert parameter disk 2- of the SIREMOBIL system software from the update kit in drive A of the service PC.

- Start the system service software on the service PC and log in ("System" menu - "Connect", "Logon" button).

- Answer the prompt "Password has been changes. Put new Password to Unit?" by clicking on the "Yes" button.

- Close the info window "Password expires on 00:00:00" by clicking on the "OK" button.

- The program window " Service PC- SIREMOBIL .... " (Fig. 1) is displayed.

- Select the "Data" - "Backup" menu.

- Select the "Parameters" line in the window (mark checkbox) and start the backup. The displayed remarks line can remain empty.

- Then return to the main menu.

Download of the system software

NOTE	With existing POWERMOBIL or ARCOSKOP systems, skip this section. Continue with section Saving the patient images.

- Select the "Data" menu in the " Service PC- SIREMOBIL .." main window (1/Fig. 1).
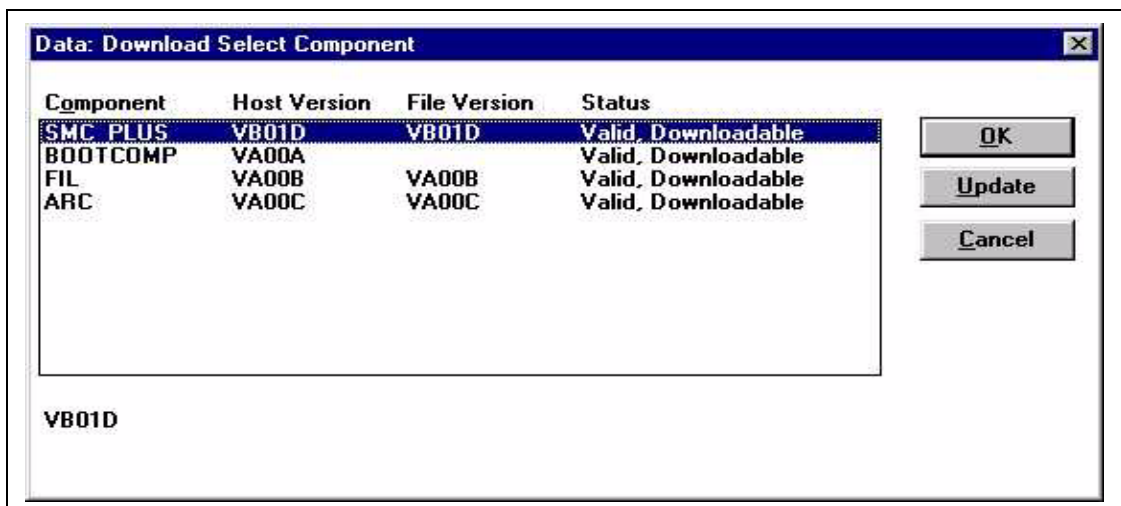
- Select the "Download" menu.

Fig. 2

- The "Data: Download Select Component" window (Fig. 2) is displayed.

NOTE	Fig. 2 shows the "Data: Download" window as an example. The current system software versions and the software versions available as files on the service PC are displayed in the "Host Version" and "File Version" columns. The displayed software versions vary according to the installed and delivered software versions.

- Select the "SMC PLUS" line and start the download by clicking on the "OK" button.

- Confirm the inquiry "Flash-EPROMs of the selected component will be erased. This process may take some time. Do you want to continue?" by clicking on the "Yes" button.

- Start download by clicking on the "Start" button.

NOTE	Only the host software (SMC PLUS) has to be updated by the download. The download procedure is the same for all SIREMOBIL types, only the software versions are different.

- After the download, wait for about one minute until the system is rebooted.

- Close the download window by clicking on the "Cancel" button.

- Separate the service program by logging off from the SIREMOBIL ("System" - "Logoff" menu).

- Enter "Update SW Vxxxx" and click on the "Put to Unit" button.
  (xxxx is here the placeholder for the SW version).

- Exit the service program by selecting the "System" - "Quit" menu.

- Switch the SIREMOBIL off and back on.

- The SIREMOBIL is ready for operation again.

- Remove the old system software disks from the system manual (or logbook) and insert the new system software disks.

Saving the patient images

⚠ **WARNING**	**Loss of all patient images!**
	In the course of the software installation, all saved data of the Memoskop hard disk must be erased. Refer to the "Erasing the Memoskop hard disk" paragraph.
	Before the hard disk is erased, inform the customer that all patient images (including the write-protected patient images) are no longer available.
	If a Memoskop with MOD drive is available, the still required patient images can be saved onto MOD.
	If a Multispot camera or laser camera is available, the still required patient images can be exposed onto film.

- If required, save the patient images specified by the customer as hard copy or on MOD. Unfortunately, it is not possible to save the patient images using the DICOM Bridge!

Saving the MEMOSKOP parameters to disk

NOTE	Please observe the prerequisites on page 3-4.

NOTE	Before downloading the Memoskop software, save the Memoskop parameters to disk. In case transfer errors when saving the parameters, please observe the notes on page 3-4 and the Memoskop upgrade flowchart. If the Memoskop parameters still cannot be saved to disk, they must be read out and noted manually (user setup and technical setup)

NOTE	If transmission errors or error messages occur when selecting the serial interface, during the "Get from Memoskop" "Put to Memoskop" or "Download" function calls, or when loading the language file, please repeat the procedure several times. If the problem persists, exit the service program, switch the SIREMOBIL off and back on, and wait for the system to reboot. Then start the service program once again and repeat the last working steps.

NOTE	Before installing or using the system or Memoskop service software, deactivate the write protection of the parameter disks.

- Insert an empty, formatted disk in drive A of the service PC.

- Start the MEMOSKOP service software.

- Enter the password and press the return key on the PC.

- Select the required serial interface of the service PC.

- The "Memoskop Service Program" program window (Fig. 3) is displayed.
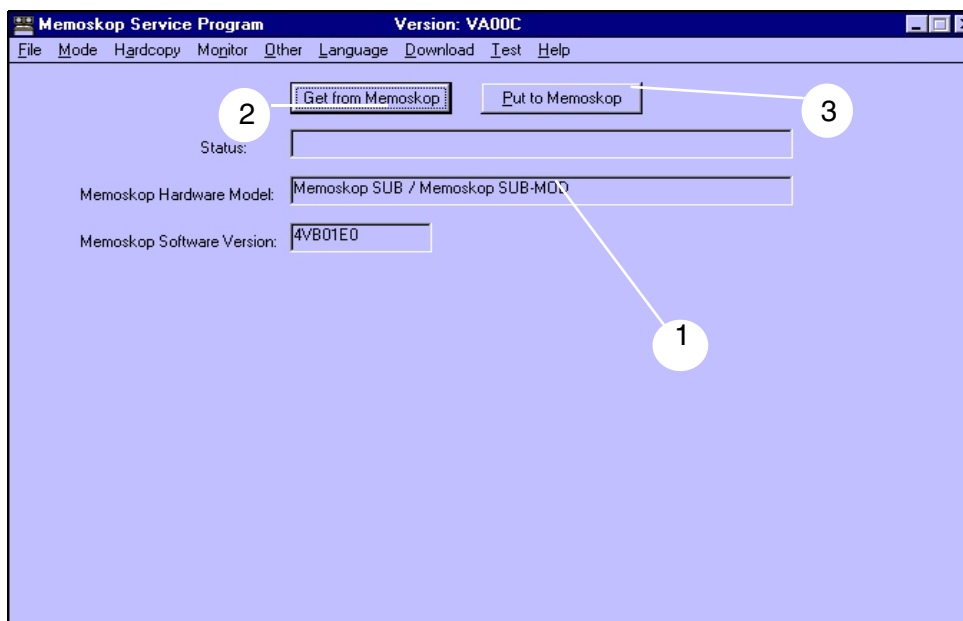

Fig. 3

- After the main menu appears, click on the "Get from Memoskop" button.

- Close the message "This will kill all your local settings in Service Memoskop" by clicking on the "OK" button. Wait until the data have been transferred from the Memoskop to the service PC. Following a correct data transfer "....Receiving configuration done" will be displayed in the status line.

- Then save the parameters to disk ("File" menu, "Save" submenu).

- Use the current date as the file name. Enter "mem" as the file extension.

Example:

The current date is: (DD_MM_YY)   28_01_03

Enter file name and file extension: 28_01_03.mem

- Wait until the data are saved to disk.

NOTE	**If errors are displayed, observe the prerequisites on page 3-4.**

NOTE	**If the Memoskop service program must be restarted, also switch the system off and back on and wait for the system to reboot (approx. 3 minutes).**

- If saving the Memoskop parameters is not possible, all parameters (user and technical setup) must be read out and noted.

Download MEMOSKOP software

NOTE	If errors occur during the Memoskop download (e.g. service PC - Memoskop communication error) observe the prerequisites on page 3-4.
	In this case, stop the download and perform it as explained in the section "Download Memoskop with empty flash Proms".
	The displayed Memoskop service software program windows may vary slightly.

- Insert the software disk matching the installed Memoskop version (1/Fig. 3) in drive A (MEMOSKOP software).
- Select the "Download" menu.
- Click on the "Select file for Download:" button (1/Fig. 4).
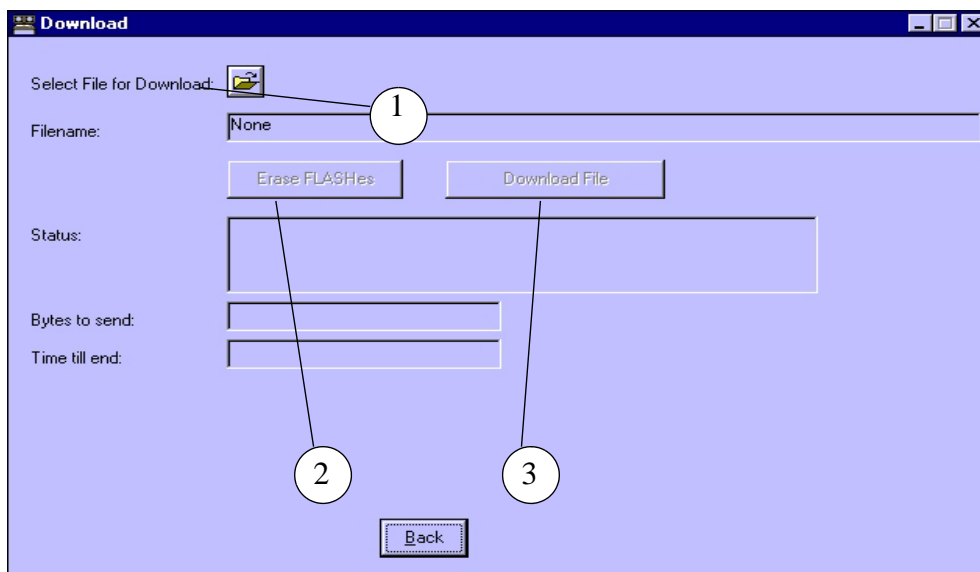
Fig. 4

- The "Open File" program window (Fig. 5) is opened.

Fig. 5

- Select drive A.

- With existing Memoskop FAST, select the file 5VB00A0.mot;

- With all other types of Memoskop, select the file xVC02A0.mot (Fig. 5).
  (x = 3 or 4, depending upon the MEMOSKOP used, see following list)

x = 3   MEMOSKOP C / C-MOD   Select 3VC02A0.mot

x = 4   MEMOSKOP CSub/CSub-MOD   Select 4VC02A0.mot

x = 5   MEMOSKOP FAST   Select 5VB00A0.mot

- Confirm your selection by clicking on the "OK" button.

NOTE	If the Memoskop type was not automatically reported to the service program by the Memoskop, the installed Memoskop type must be listed in the selection window (Fig. 6).
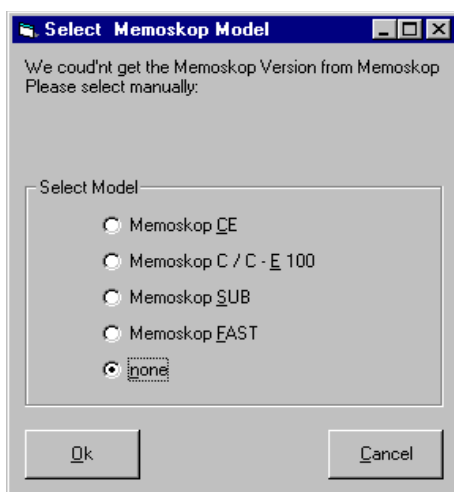
Fig. 6

- Then "Erase FLASHes" (2/Fig. 4).

- Answer the prompt "This process will erase Flashes - ARE YOU SURE" by clicking on the "Yes" button.

  ⇨   After deletion of the flash PROMs, the download is started automatically after 30 seconds.

- After deletion of the flash PROMs, start the download by clicking on the "Start" button in the displayed window.

NOTE	The download takes approximately 20 minutes.

NOTE	If errors occurred during the download (e.g. communication error or undefined characters in the status line), cancel the download and repeat it as outlined in the section "Download with empty flash PROMs".

- Following a successful download, "Download complete without errors" will be displayed. Close the window by clicking on the "OK" button.

- Wait until the Memoskop has rebooted. The connection to the service PC will then be interrupted.

- Then press the "Back" button in the download window on the service PC and quit the service program by clicking on the "Exit" button.

- Switch the system off and back on and wait for it to boot up (approx. 3 minutes).

- Start the Memoskop service program once again.

NOTE	**Due to the new MEMOSKOP data structure, MEMOSKOP errors can be displayed on the monitor.** **These disappear after deleting the MEMOSKOP hard disk and can be ignored at the moment.**

- After a successful download of the Memoskop, skip the following section "Download MEMOSKOP with empty Flash PROMs".

Download MEMOSKOP with empty flash PROMs

NOTE	**This section describes the download process for Memoskops with empty Flash PROMs. If the download was performed successfully - as described in the previous section - skip this section.**

- Switch the system off and close the service program.

- Open the cover of the system basic unit and the rear cover of the monitor cart.

- Set the service switch (DIP switch) D1.S3.2 to the ON position.

- Switch the system back on. Ignore error messages on the display of the basic unit.

- Depending on the Memoskop type installed, insert the supplied Memoskop software disk in drive A.

- Start the MEMOSKOP service program and enter the password.

- Select the service PC serial interface used.

- Ignore the "No communication with the X-Ray system" error message by clicking on the "Ignore" button.

- In response to the error message "The Program didn't receive the version message from the Memoskop", select the installed Memoskop type.
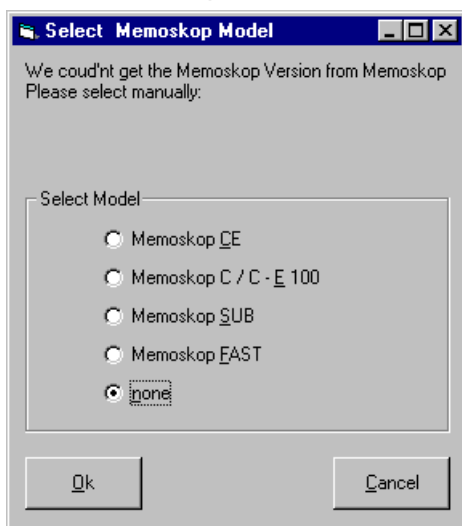
Fig. 7

Installed Memoskop type:	Select line:
Memoskop C / Memsokop C & MOD	MEMOSKOP C / C-E 100
Memoskop C-SUB / Memoskop C-SUB & MOD	MEMOSKOP Sub
Memoskop FAST	Memoskop FAST

- Select the "Download" menu in the main window of the Memoskop service software.

- Click on the "Select file for Download:" button in the download window (1 / Fig. 8).
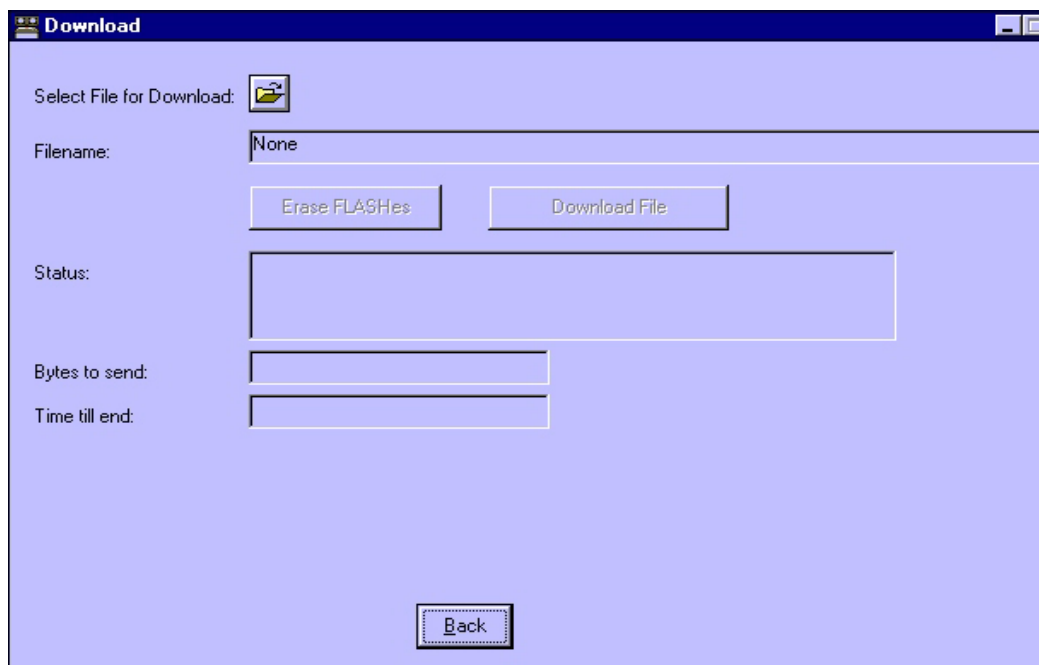

Fig. 8

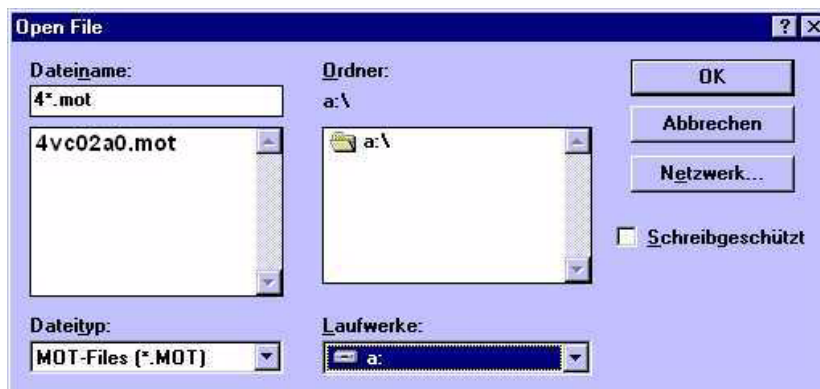- The "Open File" program window is displayed.

Fig. 9

- Select drive A.

- With existing Memoskop FAST, select the file 5VB00A0.mot and confirm your selection with "OK".

- With all other types of Memoskop, select the file xVC02A0.mot (Fig. 5) and confirm your selection with "OK".
  (x = 3 or 4, depending on the installed MEMOSKOP type)

x = 3　　MEMOSKOP C / C-MOD　　　　　Select 3VC02A0.mot

x = 4　　MEMOSKOP CSub/CSub-MOD　　Select 4VC02A0.mot

- Select "Erase FLASHes".

- Then press the reset button on the back of the Memoskop.

     ⇨   Dots will be displayed in the status line while the flash PROM is being deleted.

     ⇨   When the flash PROM has been deleted, the download is automatically started after 30 seconds.

- After deletion of the flash PROMs, start the download by clicking on the "Start" button in the displayed window..

NOTE	**The download process takes approximately 20 minutes.**

NOTE	**If errors occurred during the download (e.g. communication error or undefined characters in the status line) observe the notes on page 3-4.** **Cancel the download process, switch the system off and attempt a download several times as described in the section "Download with empty flash PROMs".**

- Following a successful download, "Download complete without errors" will be displayed.
- Close the window by clicking on the "OK" button.
- Wait until the Memoskop has rebooted. The connection to the service PC is then interrupted.
- Close the download window by clicking on the "Back" button.
- End the service program by clicking on the "Exit" button.
- Switch the system off.
- Set service switch D1.S3.2 back to the OFF position.
- Switch the system back on and wait for it to boot up.

NOTE	**Due to the new MEMOSKOP data structure, MEMOSKOP errors can be displayed on the monitor.** **These disappear after deleting the MEMOSKOP hard disk and can be ignored at the moment.**

- Start the Memoskop service program once again.

Erasing of the Memoskop hard disk

⚠ **WARNING**	**Loss of all patient images!**
	The following work describes erasing the MEMOSKOP hard disk.
	Before the hard disk is erased, inform the customer that all patient images (including the write-protected patient images) are no longer available.
	If a Memoskop with MOD drive is available, the still required patient images can be saved onto MOD.
	If a Multispot camera or laser camera is available, the still required patient images can be exposed onto film.

- Call up the Technical Setup (CTRL + T) on the MEMOSKOP.

- Select the "Diagnostics" menu.

- Select the "Erase internal Disk" submenu and select "Yes" with the cursor keys. Deletion of the data is started by pressing the Return key.

- After deletion, exit the Technical Setup again by pressing the "Home" key .

Loading the language files

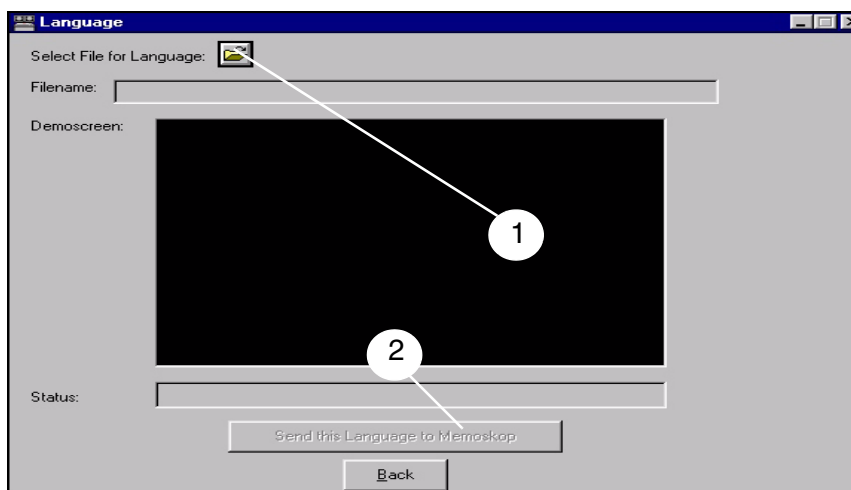| NOTE	**This section can be skipped for English speaking countries (default language).**

Fig. 10

- Select the "Language" menu in the "Memoskop Service Program" window (Fig. 3).

- The "Transferring Language" window is displayed (Fig. 10).

- With existing Memoskop Fast, insert the disk with the language files in drive A (separate disk)
  With all other Memoskop types, insert the disk with the language files (on the MEMOSKOP software disk) in drive A.

- Click on the Select file: "Language File" button (1/Fig. 10).

- The "Open File" window is displayed.

- Select drive A.

- Select the required language file and confirm by clicking on the "Open" button.

Language	Type of Memoskop	
	Memoskop FAST	alle other types of Memoskop
German:	GERMANF2.TXT*	GERMAN04.TXT*
French:	FRENCHF2.TXT*	FRENCH04.TXT*
Spanish:	SPAINF2.TXT*	SPAIN04.TXT*
Italian:	ITALIAF2.TXT*	ITALIA04.TXT*
English:	Default language, loading of the language not necessary.	

The language file names include a identification of the revision level.

Example Memoskop FAST: "GERMAN**F2**.TXT", all other types of Memoskop: "GERMAN**04**.TXT". The revision level **F2** and **04** are valid at the date of the publication of this document, but may change in the future with the release of new language files. Therefore the identification of the revision level may differ.

- Select the "Send this Language to Memoskop" button (2/Fig. 10).

  ⇨ **If an error message is displayed the first time the language file is loaded, select the "Send this Language to Memoskop" button again.**

  ⇨ Following successful transfer of the language file, the "Language load done" status line will be displayed.

- Close the window by clicking on the "Back" button.

Testing the Memoskop

- Select the "User Setup" on the Memoskop keyboard.

- The displayed menus must be shown in the selected language.

- The software version of the MEMOSKOP must be displayed in the second line.

- Exit the "User Setup" with the "Home" key.

Installation of the program pcAnywhere
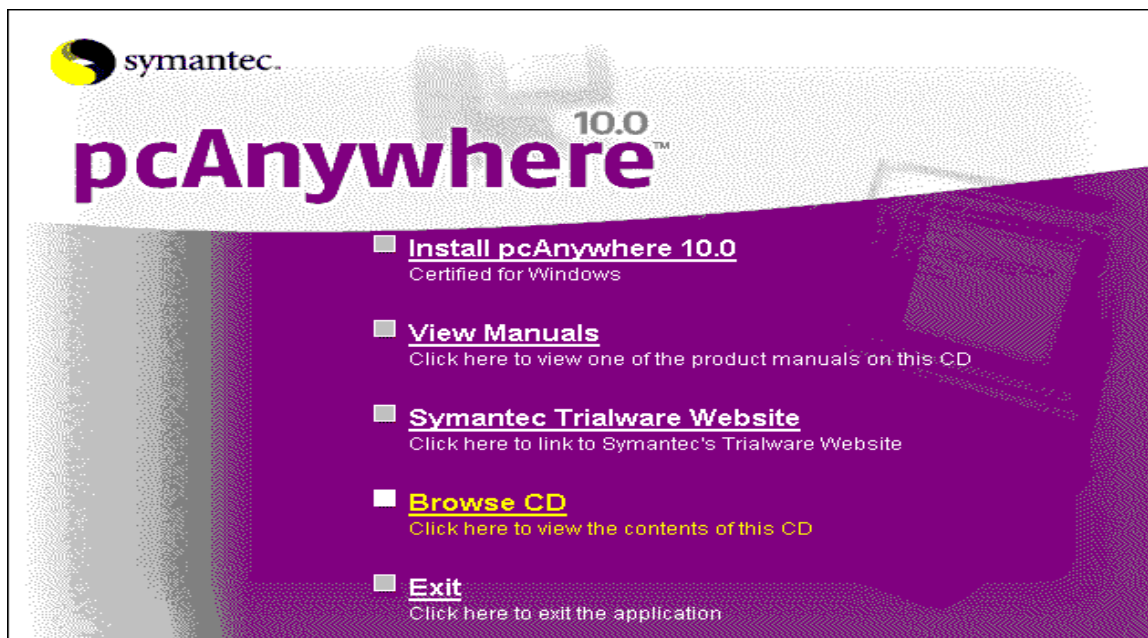
Fig. 11

NOTE	The following descriptions refer to the installation of the pcAnywhere software on the service PC. The pcAnywhere software has already been installed on the DICOM Bridge and is automatically started as host.

NOTE	As service software, pcAnywhere is delivered with the current Version 10.5. This version can be installed on the service PC with operating system WINDOWS 95 and WINDOWS 98 without any restrictions. If a service PC with WINDOWS NT4 is available, service pack 6 or higher must be installed. However, also Version 9.xx is present on the CD, which can be used without problem for the installation of the three above-mentioned operating systems. The following installation description therefore refers to Version 9.xx. The installation may slightly deviate from the description. Note the menu setup of the installation program. If you install Version 10.5 on your service PC, proceed according to the menu setup of the program.

- Insert the CD-ROM (included in scope of delivery of the DICOM Bridge) in the drive of the service PC. In case of autostart drives, the installation program is started automatically. The installation menu appears (Fig. 11).

NOTE	If not: Call up the Explorer program, select the CD-ROM drive and start the program setup.exe, using the path (CD-ROM):\Installs\Unsupported\pcA_921\setup.exe.

- Click on the menu "Browse CD".

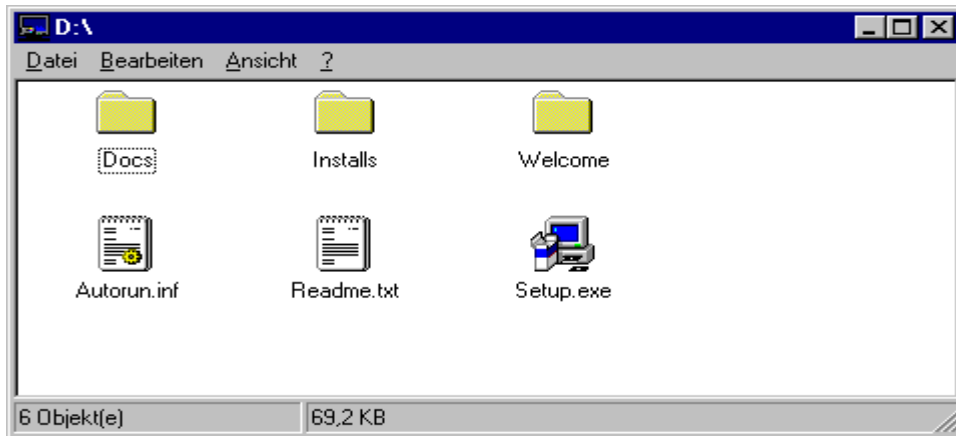- Window (Fig. 12) is opened.

Fig. 12

- Click on icon "Installs".

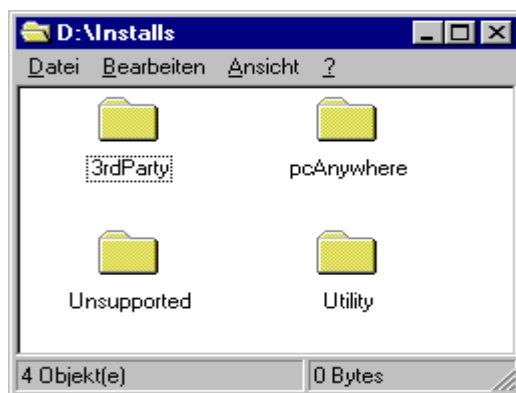- Window (Fig. 13) is opened.

Fig. 13

- Click on icon "Unsupported".
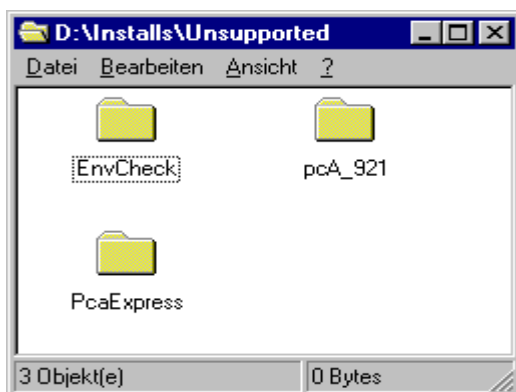
- Window (Fig. 14) is opened.

Fig. 14

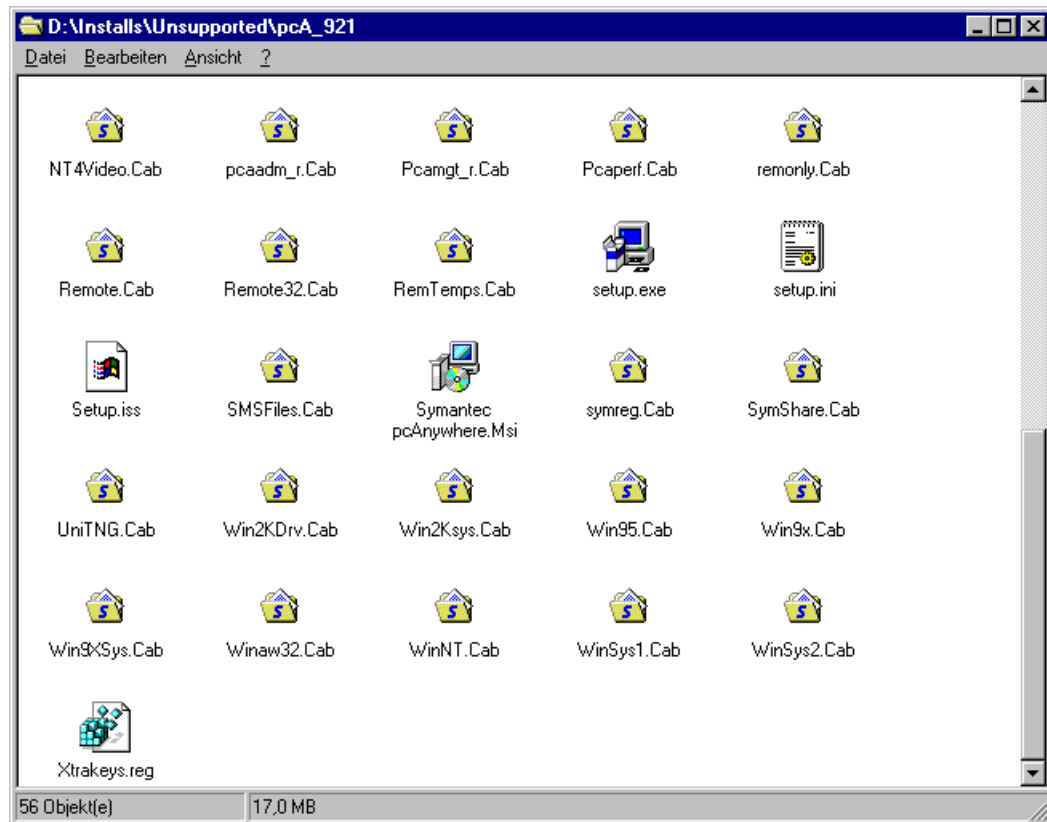- Click on icon "pcA_921".
- Window (Fig. 15) is opened.

Fig. 15

- Click on icon "setup.exe".
- The setup program is started.
- Window (Fig. 16) is displayed.

Fig. 16

- Click on "Next >" button in the window.

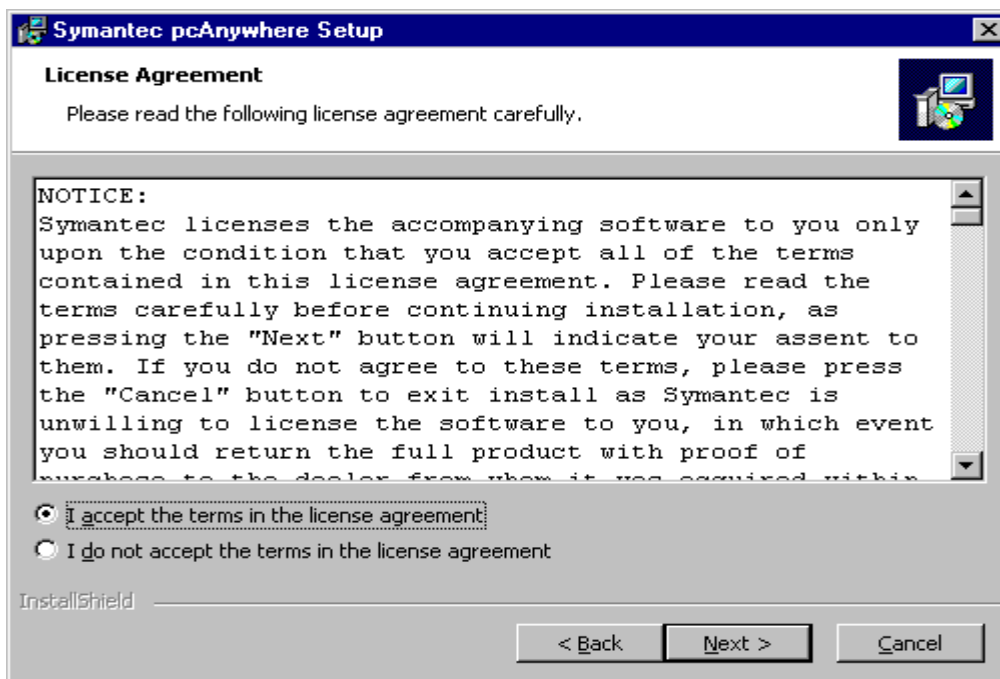- Window with "License Agreement" (Fig. 17) is opened.

Fig. 17

- Select item "I accept the terms in the license agreement".

- Then select "Next >" button.

- Window "Customer Information" (Fig. 18) is opened.
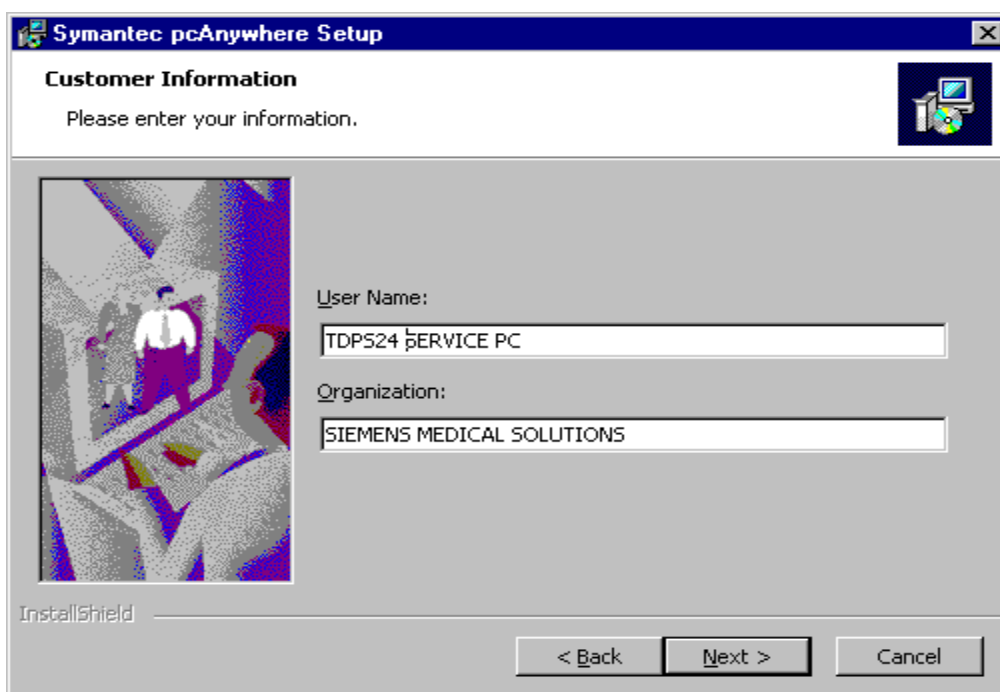

Fig. 18

- Enter as name the designation of your department.
  Enter as organization the designation of your organization.

- Then click on "Next >" button.
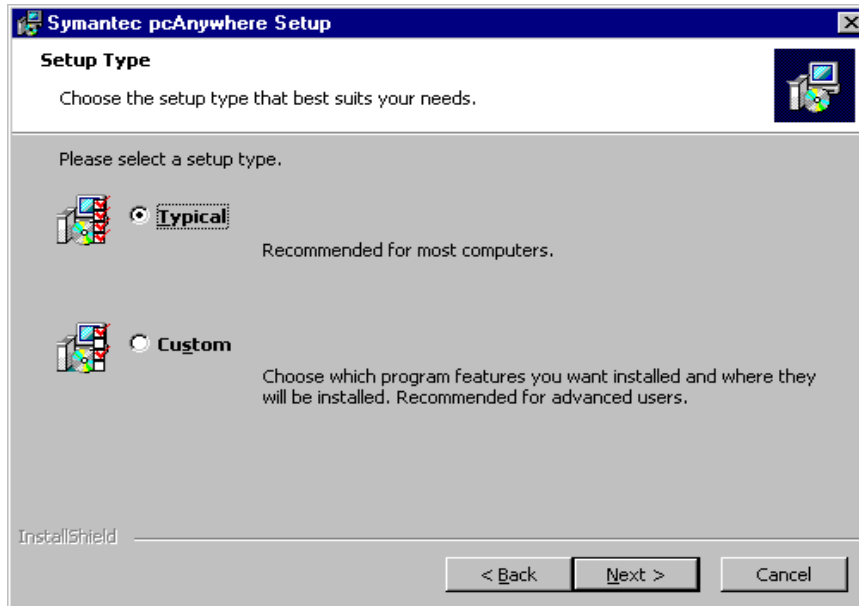
- Window "Setup Type" (Fig. 19) appears.

Fig. 19

- Select item "Typical".

- Then select "Next >" button.

- Window "Ready to Install the Program" (Fig. 20) is displayed.
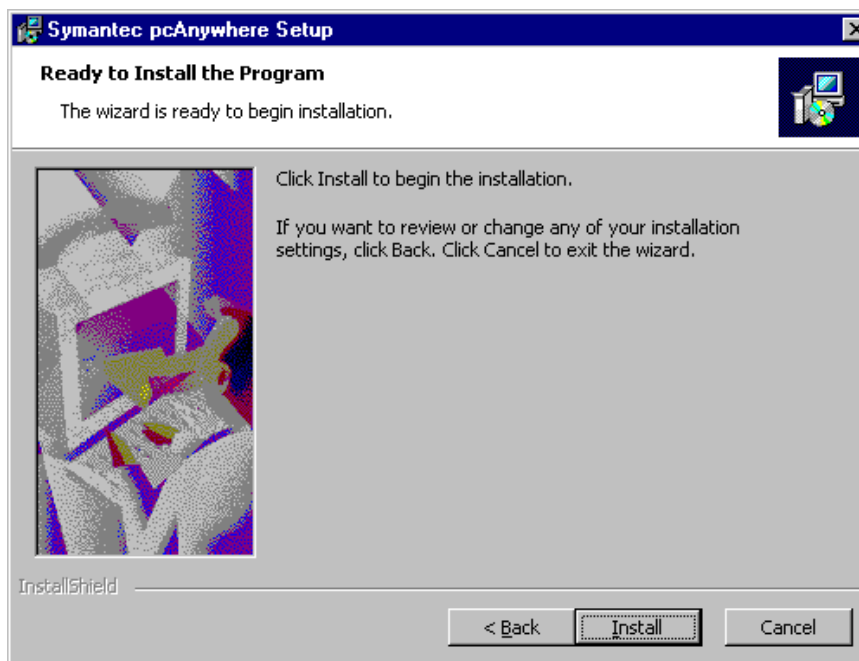

Fig. 20

- Click on "Install" button.
  The following window shows the status of the installation.

- Click on the "Next >" button on each of the following windows
  "Symatec Support Solutions", "Windows Solutions" and "How to reach us Online", to skip
  the windows.

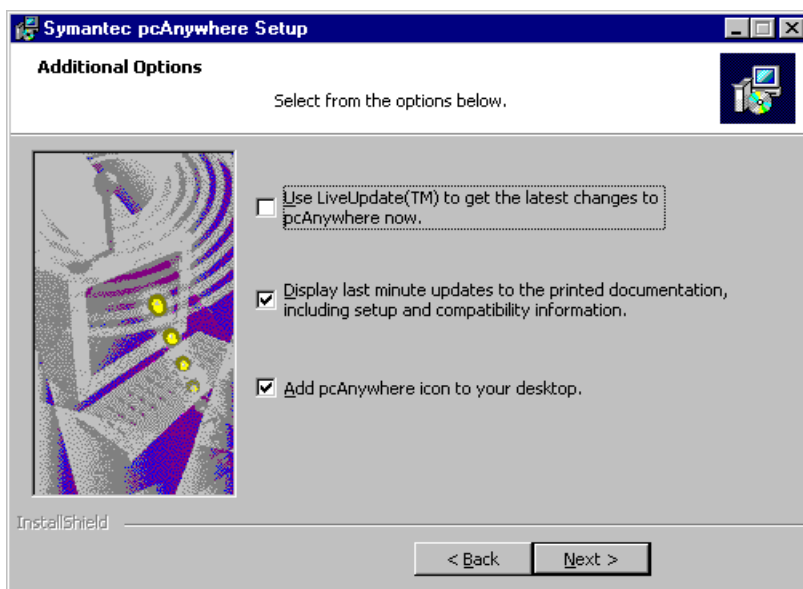- Window "Additional Options" (Fig. 21) is displayed.

Fig. 21

- Deselect selection "Use LiveUpdate™ to get the latest changes to pcAnywhere now".

- Select item "Display last minute updates...." and "Add pcAnywhere icon to your desktop".

- Then click on "Next >" button.

- In the editor window, the file "Readme.txt" is displayed and can be read. Then exit editor.

- Window "Please Register Symatec pcAnywhere" (Fig. 22) is displayed.
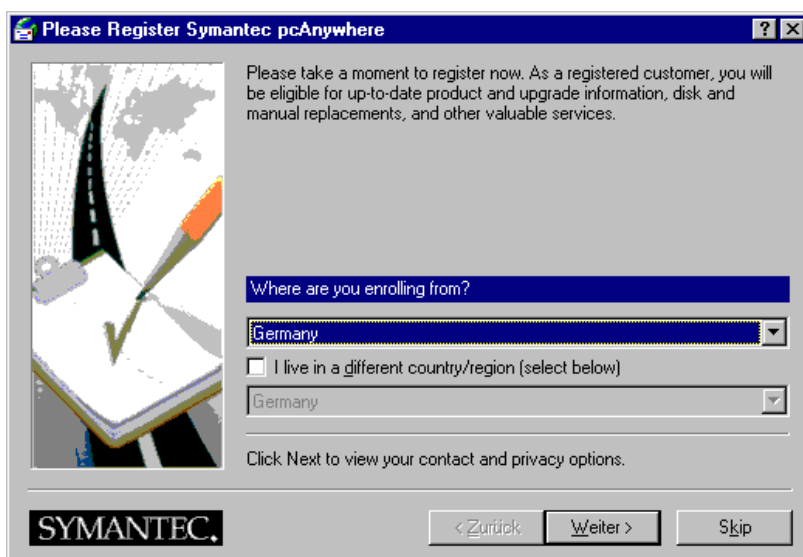

Fig. 22

- Click on "Skip" button, do not perform registration.

- Close the query "Are you sure you want to skip the registration process" by clicking on "Yes" button.

NOTE	**With initial start of the pcAnywhere program, the registration window is displayed once more. Skip the registration then again.**

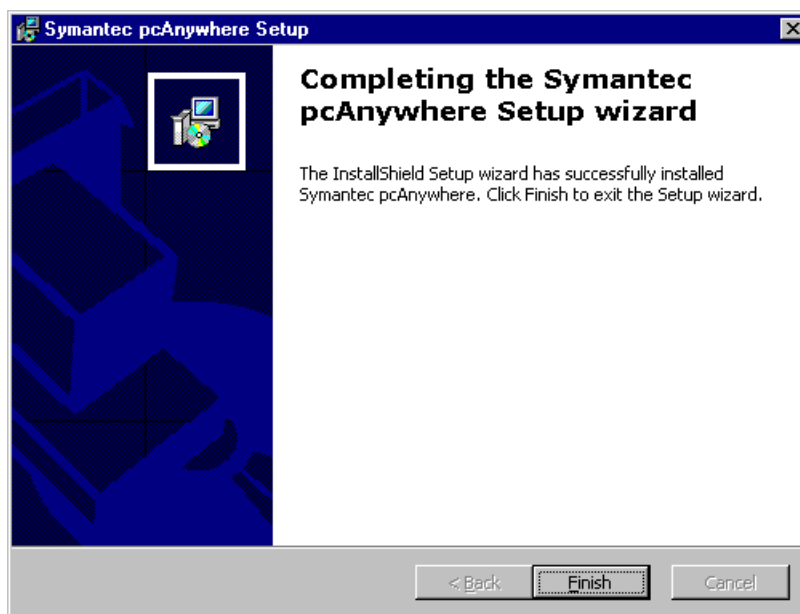- Window "Completing the Symatec pcAnywhere setup wizard" (Fig. 23) is displayed.

Fig. 23

- Click on "Finish" button.

- Close the query "You must restart your system for the configuration changes......" by clicking on the "Yes" button. The service PC is shut down and restarted.

- After startup of the service PC, icon "Symatec pcAnywhere" is displayed on the screen. The program is started by clicking on the icon (double-click).

NOTE	**The registration window is displayed again with initial start of the program. Do not perform registration and exit again.**

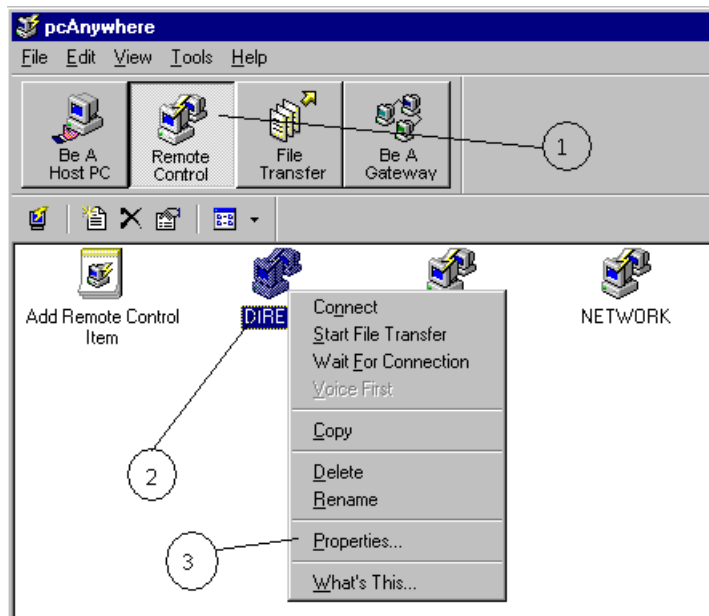| NOTE	**If a window "Host Security Warning" is displayed after program start, select item "Don't show me this message again" and then close the question "Do you wish to set caller privileges now?" by clicking on the "No" button.**

Fig. 24

- Select the Remote Control button (1/Fig. 24).

- Place the mouse pointer over the icon "Direct" (2/Fig. 24) and press right mouse button. Menu (3/Fig. 24) appears.

- Click on the row "Properties...". Window "DIRECT Properties" (Fig. 25) is displayed.

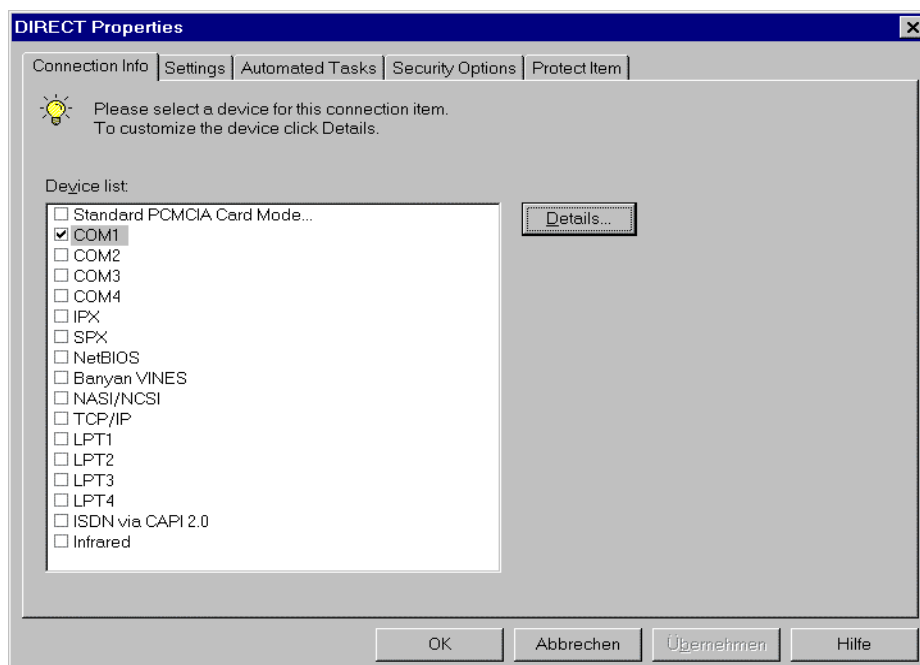- Click on "COM1" (or "COM2", if port COM2 is used).

- Click on "Details" button.

Fig. 25

- Select the settings as shown in the Fig. 26 and click OK.
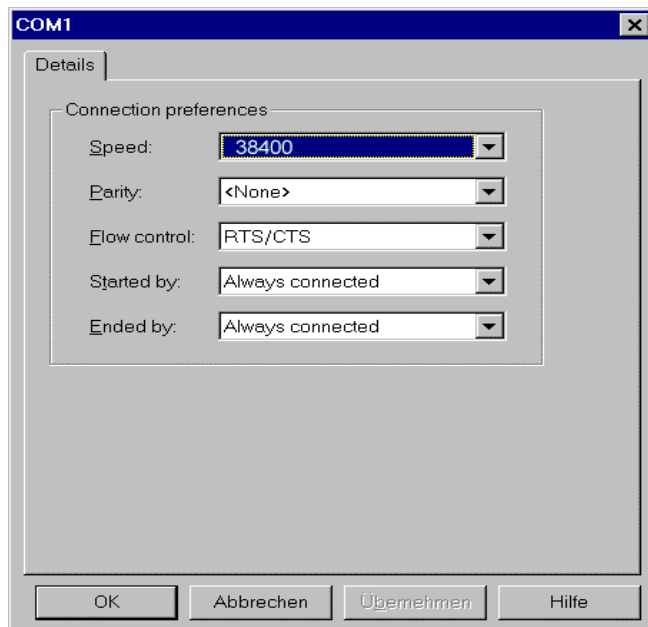- Close the "DIRECT Properties" window by clicking on OK.

Fig. 26

Connection to DICOM Bridge

Prerequisites:

- The serial connection cable between DICOM Bridge, plug COM2
  (see Chapter 2, 6/Fig. 2) and the serial interface of the service PC have been connected.

- The system (incl. DICOM Bridge) has been switched on and is ready for operation.
  Note startup time of approx. 3 minutes.

- Service PC has been started.

NOTE	**After switching on the system, wait for approx. 3 minutes startup time. The system is started up in about 30 seconds. However, the DICOM Bridge requires a startup time of approx. 3 minutes. There is no status display. If the system is operated when the DICOM Bridge has not yet been started up completely, the DICOM Bridge is not correctly booted. In this case, the system must be switched off and on again and a startup time of 3 minutes must be observed.**

- Select the "Remote Control" icon in the pcAnywhere window and then double-click the "DIRECT" icon in the lower section of the window.
  A connection is opened to the DICOM Bridge.
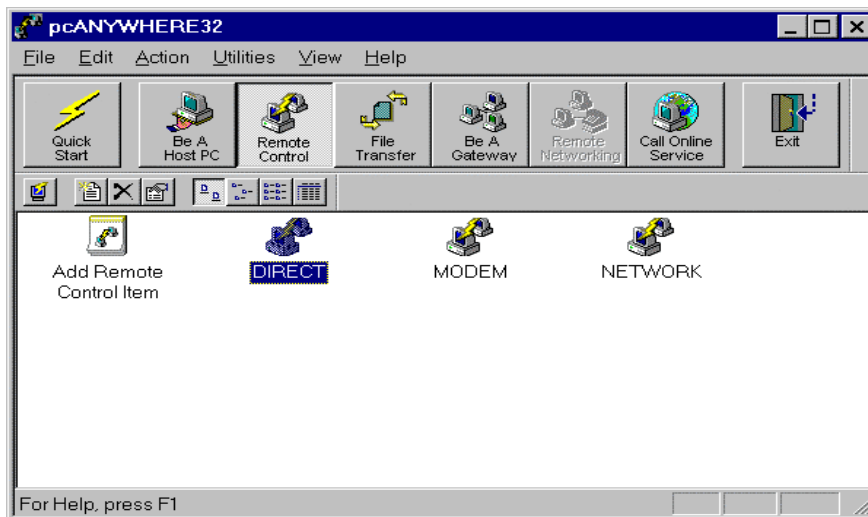
Fig. 27

- Fig. 28 shows a sample of the PCAnywhere window. The actual window may differ slightly from this example.

- The DICOM Bridge screen is displayed in the window "(Name of DICOM Bridge) - pcANYWHERE".

- The upper row of icons is used to enter the settings for the pcANYWHERE program (pcANYWHERE section).

- All icons and menus located below this row belong to the DICOM Bridge (DICOM Bridge section). You can call up the corresponding programs / functions of DICOM Bridge by selecting these icons.

Fig. 28

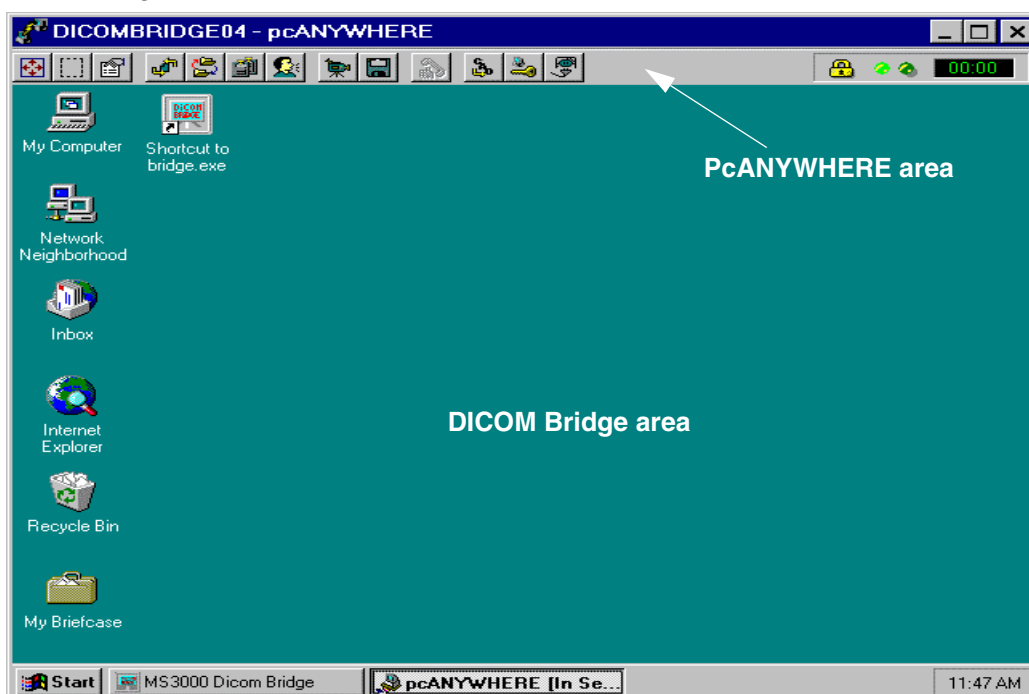## Network

| NOTE | The customer-specific cross-reference data is identified by [xx] in the pre-installation checklist as well as in these installation instructions, whereby xx stands for the corresponding cross-reference number. Enter the data corresponding to the reference numbers in the input masks.
Since the description of the configuration frequently changes between the service PC operating program and the DICOM Bridge operating program (via the pcANYWHERE program), the following references were established: |
|---|---|

- If reference is being made to the service PC operating program, "PC" is entered in front of the section.
- If reference is being made to the operating software for DICOM Bridge (via the pcANYWHERE program), "DICOM" is entered in front of the section.
  Example:
  Open the start menu....
  ... on the DICOM Bridge: DICOM: Open the start menu
  ... on the service PC: PC: Open the start menu

- PC: - Start the pcANYWHERE program
            and establish the serial connection to the DICOM Bridge;
            to do this, select the "Remote Control" icon and double-click on the
            "DIRECT" icon.
- DICOM: - Open the start menu and select the menu "Settings - Control panel."
- DICOM: - In the "Control Panel" window, open the network configuration screen by
            double-clicking on the "Network" icon.
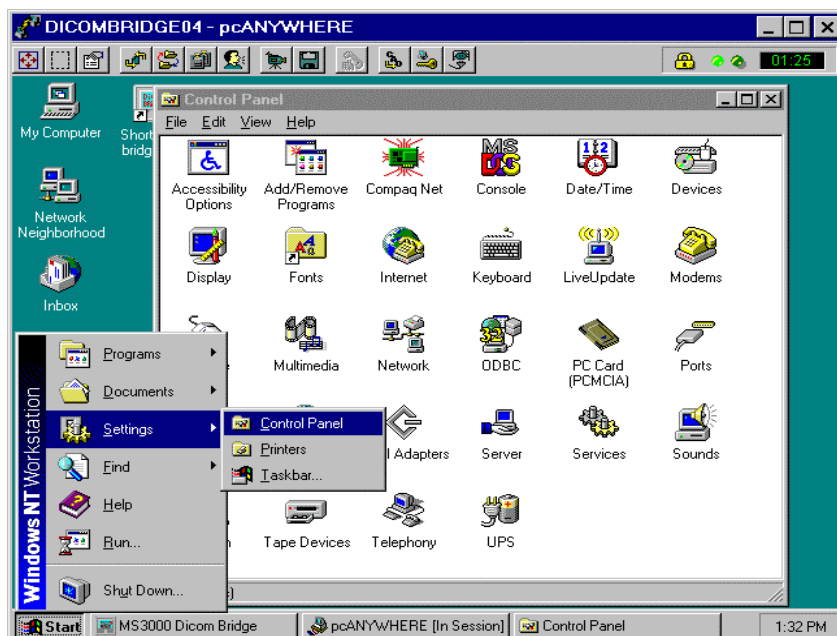
Fig. 1

- DICOM: - Click on the "Change" button in the "Network" window.
- DICOM: - In the window "Identification change":
  enter the computer name [1] determined by the network administrator,
  - click on "Workgroup" [2] or "Domain" [4] according to the information from the network administrator.
  - Enter the "Workgroup name"[3] or "Domain name" [5] determined by the customer's network administrator.
  - Then click on the "OK" button.
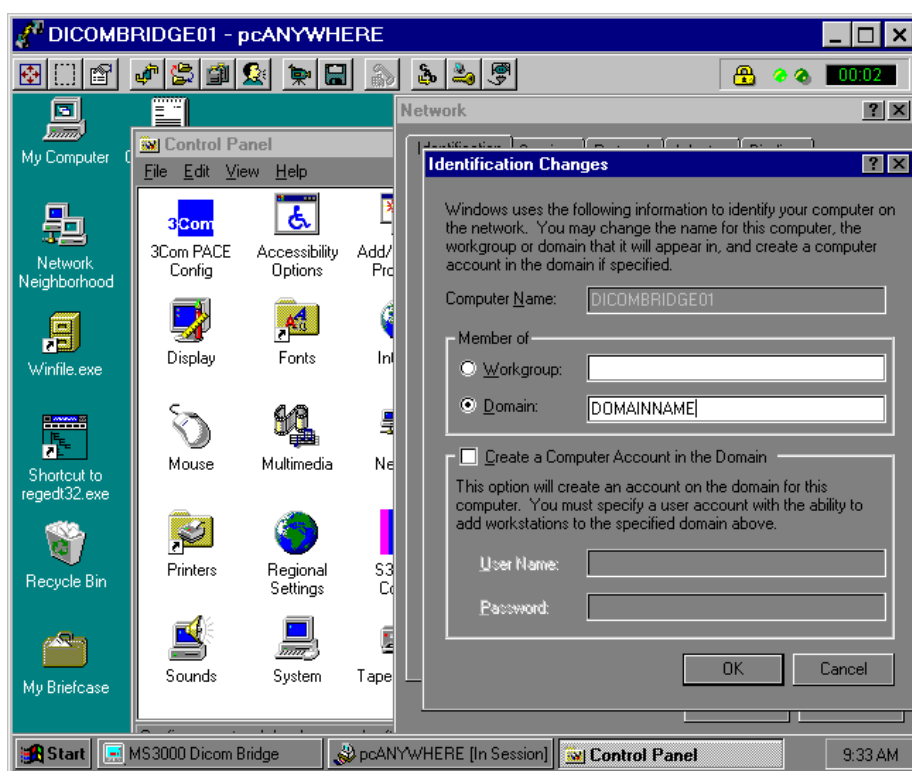
Fig. 2

- DICOM: - In the "Protocols" window, select "TCP/IP"
and click on the "Properties" button.
- DICOM: - In the "Microsoft TCP/IP Properties" window, adjust the following settings:
  - Select "IP Address".
  - Do not make any changes for "Adapter".
  - Select "Specify an IP address".
  - Enter the IP address specified by the network administrator [6], the Subnet mask [7] and , if required, the default Gateway [8].
  - If required, enter additional IP addresses [6] and Subnet masks [7] as well as additional gateways [9] under "Advanced..."
  - To enter the information, click on the "Advanced..." button. (Refer to figure 4 on the next page).
  - Subsequently additional IP addresses or Gateways can be entered by clicking on the "Add" button in the relevant window.

Fig. 3
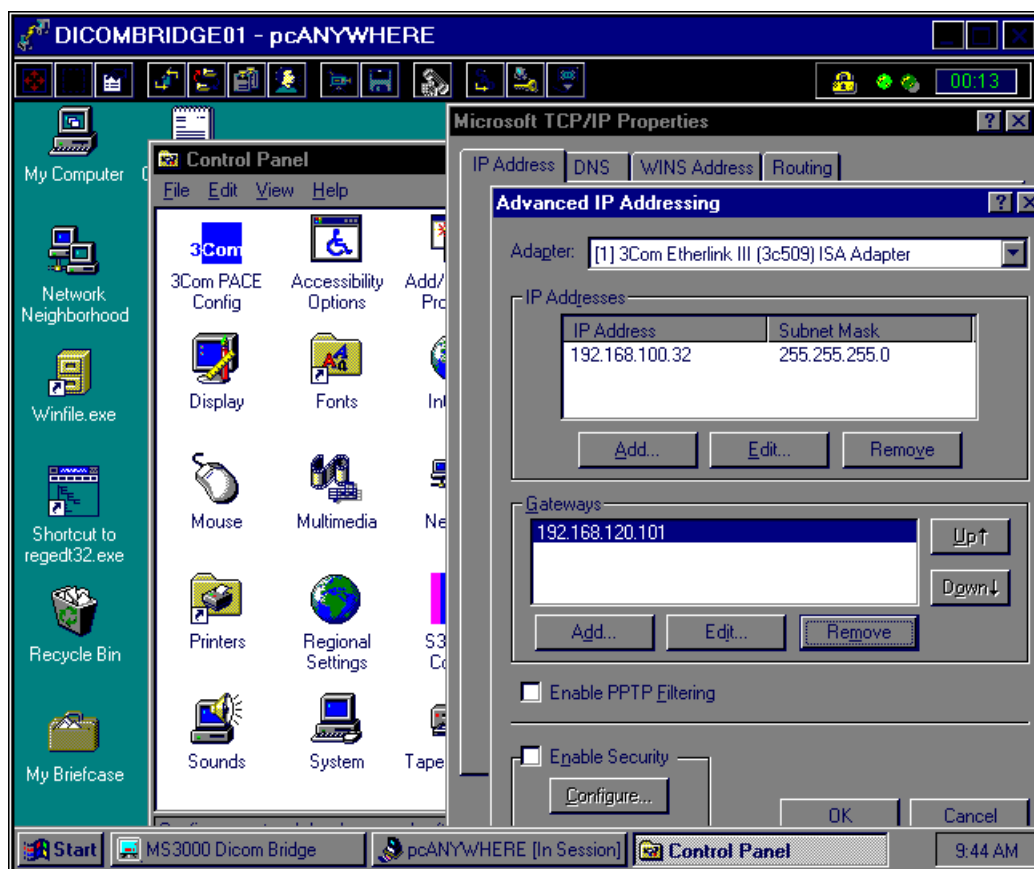
Fig. 4

- DICOM: - Open the "DNS" window.
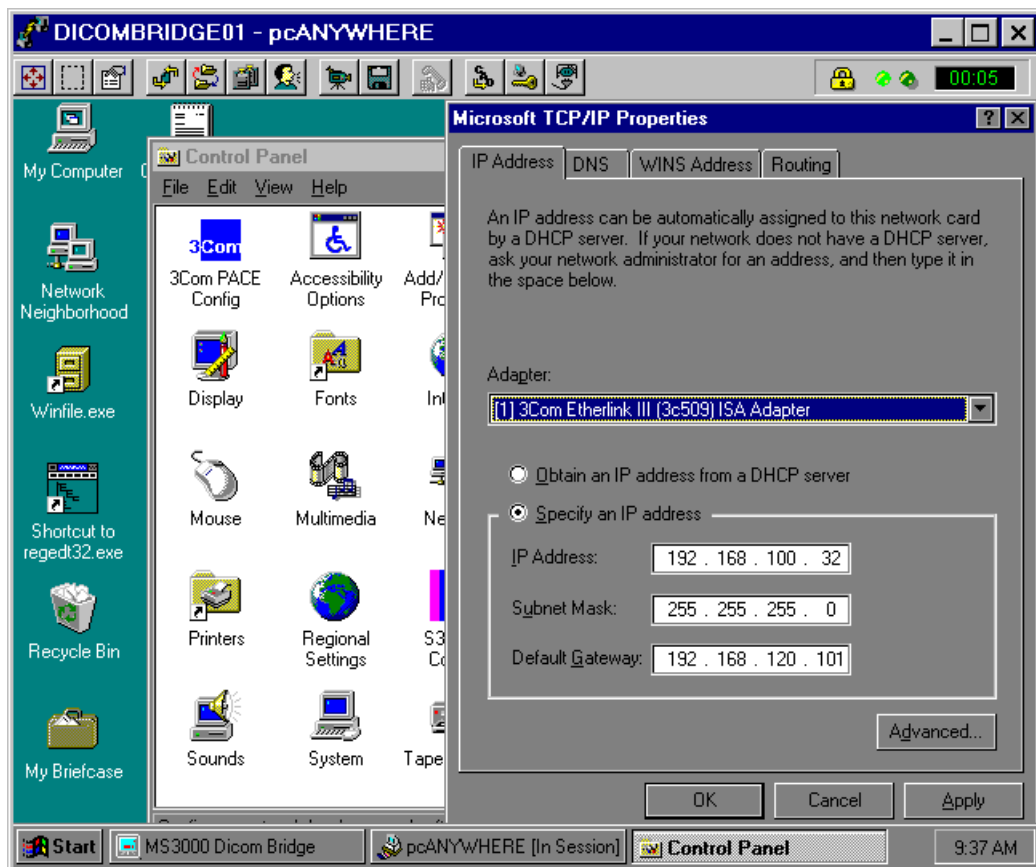 - Enter the Host name specified by the network administrator under "Host name" [10].
    (In most cases, the computer name, however this can also be a different name.)
  - Enter the DNS domain name [11] specified by the network administrator under "Domain" . (In most cases, the domain name, however, can also be a different name).
  - Enter the IP addresses [12] specified by the network administrator under "DNS Service search order" in the sequence specified.
  - For this purpose, in "DNS Service Search Order" click on the "Add" button and enter the IP addresses in the newly opened window.
  - Enter the Domain names [13] specified by the network administrator under "Domain suffix search order" in the sequence specified.
  - For this purpose, in "DNS Suffix Search Order" click on the "Add" button and enter the Domain names in the newly opened window.
    If several Domain names must be entered, enter these by renewed clicking on the "Add" button in the relevant window.
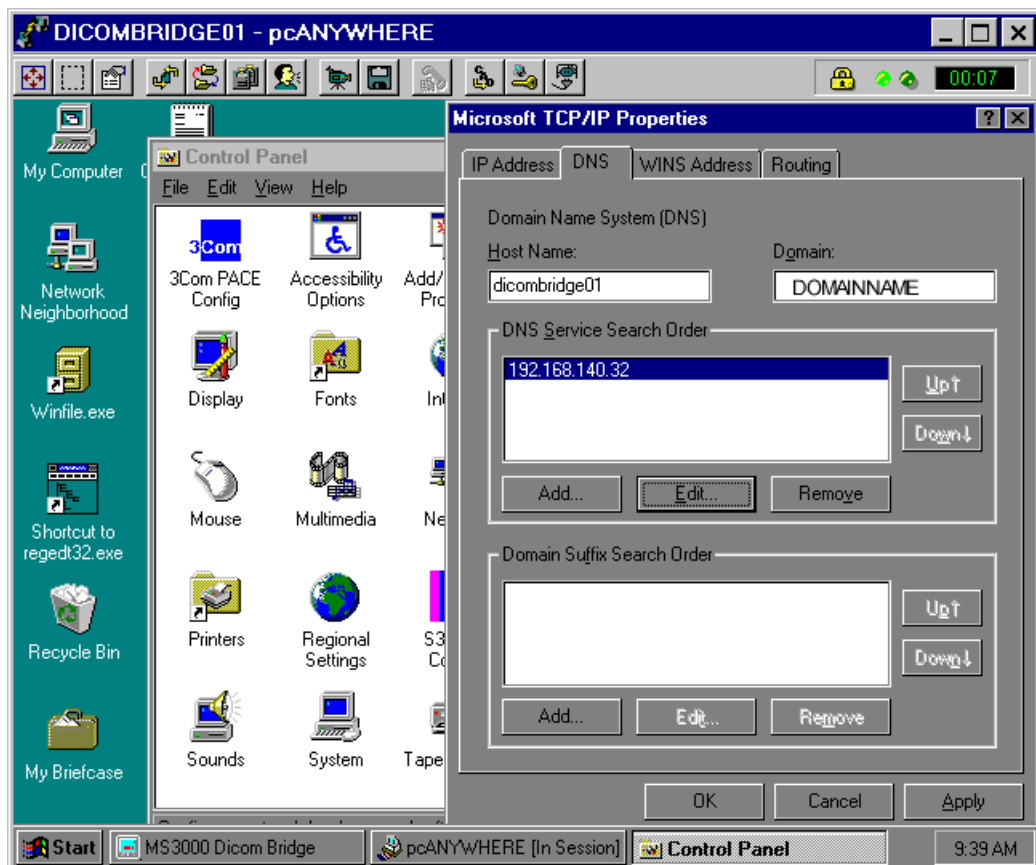
Fig. 5

- DICOM: - Open the "WINS Address" window.
  - Enter the IP addresses specified by the network administrator under "Primary WINS Server" [14] and "Secondary WINS Server" [15] .
  - Configure "Enable DNS for Windows resolution"[16] , "Enable LMHOSTS Lookup" [17], "Import LMHOSTS" [18] and "Scope ID" [18] according to the information provided by the network administrator.
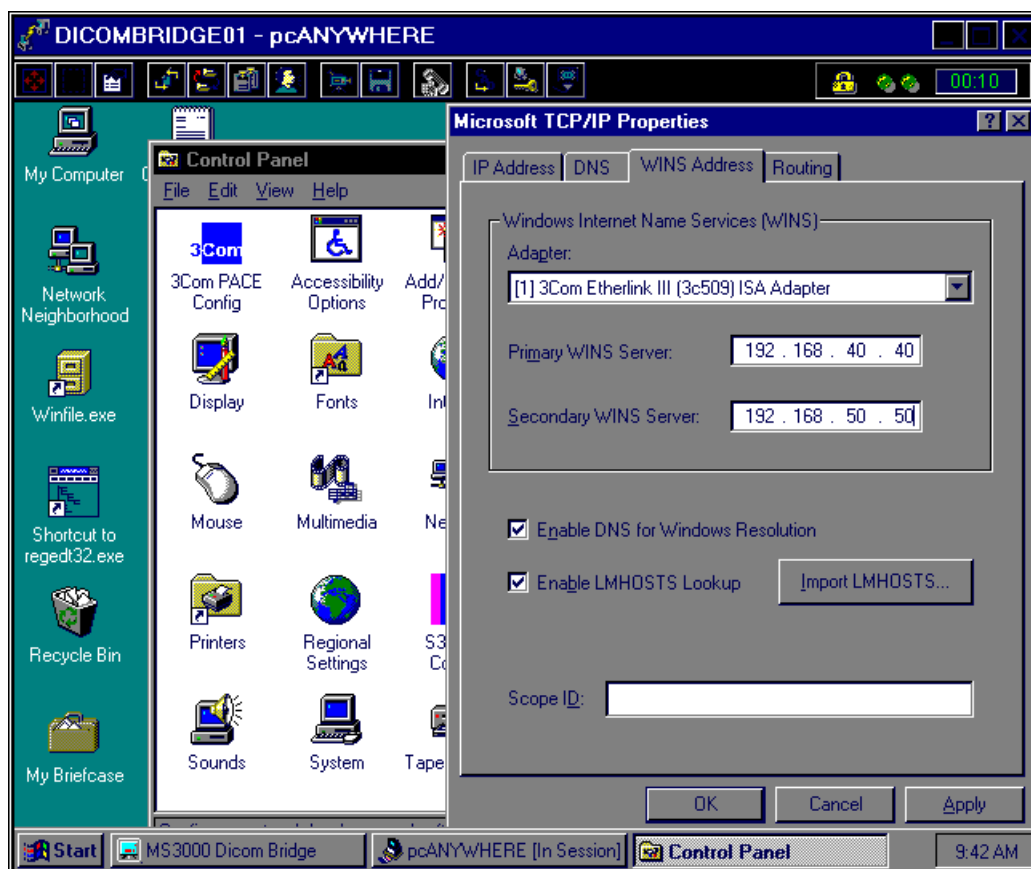
Fig. 6

- DICOM: - Open the "Routing" window.
  - Activate or deactivate the setting "Enable IP Forwarding" (IP Routing) [19] according to the information provided by the system administrator.
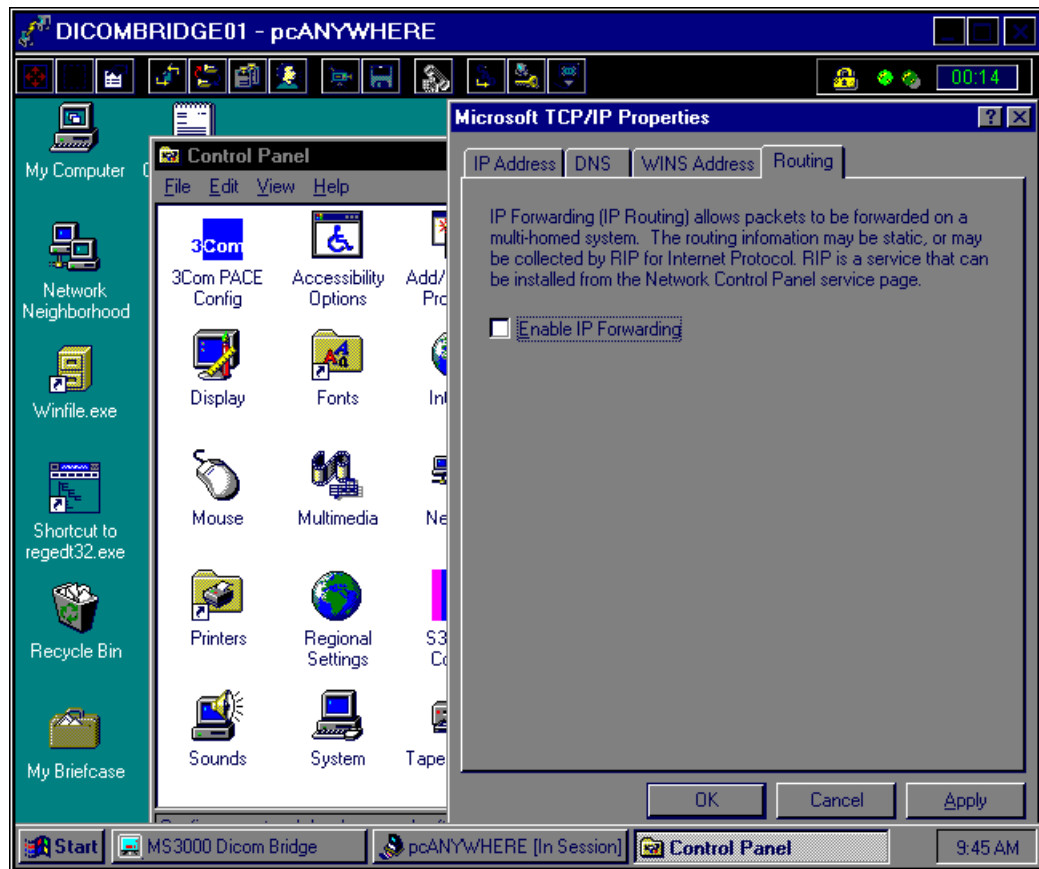
Fig. 7

Receiving stations

Configure the DICOM Bridge for the existing receiving stations by editing the following files:

Bridge.cfg; Mergecom.app; Hosts; Merge.ini; Mergecom.pro.

The file icons are located on the DICOM Bridge screen.

Double-click on the icon to open the files to be edited.

The NOTEPAD.EXE Editor will be automatically initialized for the purpose of editing the files..
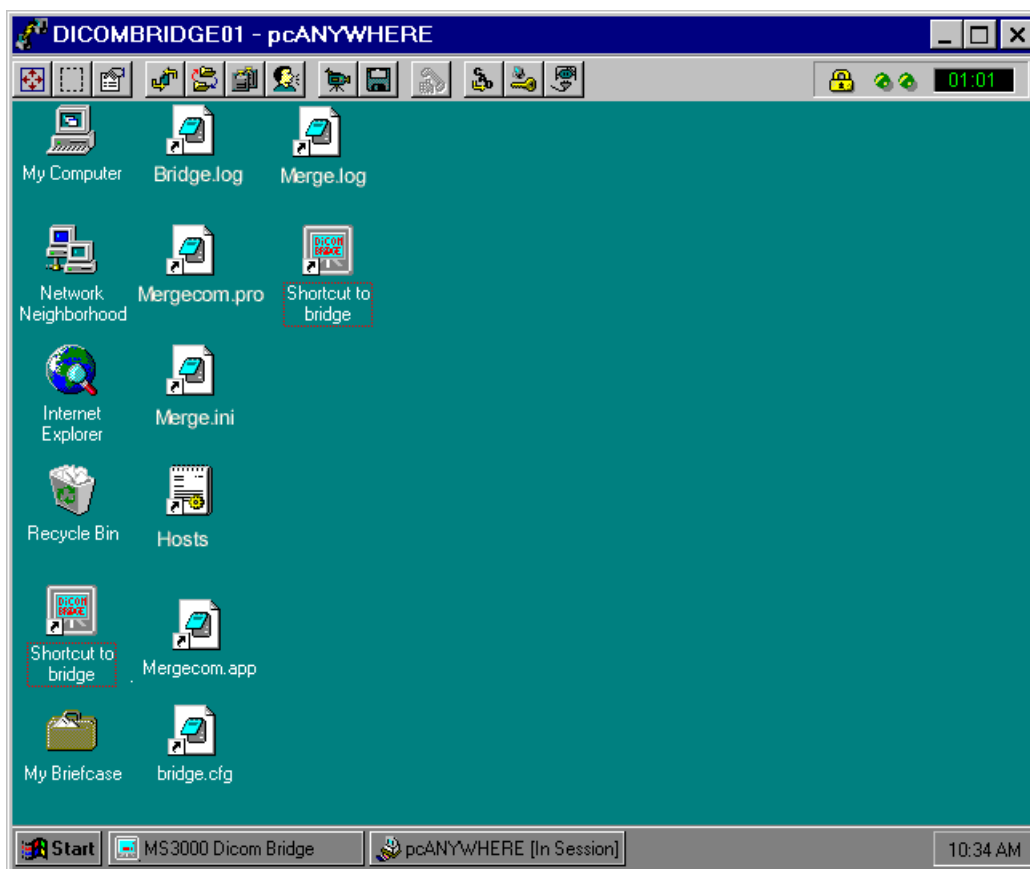
Fig. 8

Bridge.cfg file

The Bridge.cfg file contains the DICOM Bridge configuration for the receiving station functions.

Mergecom.app file

The Mergecom.app file contains the TCP/IP port number, the Host name and the receiving station services available.

Hosts file

The Hosts file contains the allocation of IP-addresses to Host names.

Merge.ini file

The Merge.ini file contains the initialization parameters for the Mergecom program, which contains the DICOM functions of the DICOM Bridge. For example, in this file you can activate or deactivate the logging of error messages for troubleshooting purposes.

Mergecom.pro file

The Mergecom.pro file contains all the DICOM Bridge functions, that allow data to be transferred to the selected receiving station via a 'handshake' process.

Merge.log file

The Merge.log file is generated by the Mergecom software package.
Messages and error messages are logged during program execution. The file can be read out for troubleshooting purposes. In cases of service questions to the USC or HSC, it is helpful to send along this file for evaluation purposes.

File: Bridge.log

The Bridge.log file is generated by the DICOM Bridge software.
Messages and error messages are logged during program execution. The file can be read out for troubleshooting purposes. In cases of service questions to the USC or HSC, it is helpful to send along this file for evaluation purposes.

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File: Bridge.cfg

NOTE	**The lines to be edited are preassigned with entries. The entries are partially only placeholders and must be replaced by the customer-specific data. Observe the notes on the relevant lines.**
NOTE	**The icons for opening the "bridge.cfg" and "mergecom.app" files are available on the desktop of the DICOM Bridge. The files can be opened by double clicking on the icons.**
NOTE	**The operating system WINDOWS NT 4 of DICOM Bridge is set to the American keyboard layout. Your service PC is set to your country-specific keyboard layout. For this reason, special characters, as for example the underscore "_", can be allocated to different keys.**

The Bridge.cfg file contains the basic configurations for the DICOM Bridge and the receiving stations, that will be receiving the data from the DICOM Bridge.

As defaults, some receiving stations have already been entered, however identified by ";" at the beginning of each line. However, they are marked as a commentary line and are not activated.

By removing the symbol ";" at the beginning of the corresponding line, this line will be activated.

A maximum of 4 receiving stations can be configured in the Bridge.cfg file.
(3 receiving stations with reporting consoles, designated as [STORAGE_NODE_x], one receiving station for printing, designated as [PRINT_NODE_1]) and one Worklist node, designated as [WORKLIST_NODE].

The Bridge.cfg file is divided into individual sections, beginning with [SECTION NAME].

Section: [INIT]

The basic configuration of the DICOM Bridge is established in this section.

APPLICATION_ENTITY_TITLE =   Default: SM_COMPACT

[20] Name of the DICOM Bridge in the network.

Delete the default entry and enter the application entity title of the DICOM Bridge.

BASE_UID =   Default: 1.3.12.2.1107.5.12.1
ID established for the DICOM Bridge, under normal conditions, this should not be changed.

APPLICATION_TIMEOUT =   Default: 120
Under normal conditions, this should not be changed.

MANUFACTURER_MODEL_NAME   Default: Siremobil

[20A] Is sent in the communication with the DICOM network as identification of the transmitting
DICOM Bridge.
If several DICOM Bridges are in operation at the customer, another name can be entered for unequivocal identification.

Section: [STORAGE_NODE_1]

This section must be changed in accordance with the information from the customer's system administrator..

NOTE	**In case certain settings cannot be specified by the customer's system administrator, proceed in accordance with the manufacturer's specifications.**
	Information pertaining to the corresponding receiving stations is located on the SIEMENS Intranet.

DESCRIPTION =

Default: Node_Name_1

[21] Name of the first receiving station. This name will be displayed on the Memoskop when calling up the contents of the hard disk (ALL PAT key) and as selection text when transferring images to a DICOM receiving station.
Maximum length: 20 characters
Valid characters: A..Z; a..z; 0..9 and _

Delete the default entry and enter the name of the first receiving station.
If the first receiving station is not used, e.g. because only the print service of the DICOM Bridge is used, then delete the default entry.

AE_TITLE =

Default: Storage_Node_1_AET

[22] User program name of the receiving station.

Delete the default entry and enter the application entity title of the first receiving station.
If the first receiving station is not used, e.g. because only the print service of the DICOM Bridge is used, then delete the default entry.

HOST_NAME =

Default: host_1

[23] Host name of the receiving station.

Delete the default entry and enter the host name of the first receiving station.
If the first receiving station is not used, e.g. because only the print service of the DICOM Bridge is used, then delete the default entry.

IP_ADDRESS =   Default: xxx.xxx.xxx.xxx

[24] The IP address of the receiving station.
Delete the default entry and enter the IP address of the first receiving station.
If the first receiving station is not used, e.g. because only the print service of the DICOM Bridge is used, then delete the default entry.

Do not enter leading zeros.
Example:
IP address specified =192.168.010.001:
Enter as = 192.168.10.1

PORT_NUM =   Default: 104

[25] Port number of the network connection.
Port number 104 has been set as the standard for DICOM.
If required, this may be changed.

ASPECT_   Possible values: DISABLED ENABLED
RATIO_CORRECTION=   Default value: DISABLED
Change to ENABLED.
For this purpose, delete text "DISABLED" and re-insert after "ENABLED" (new text: ENABLED DISABLED).
The sequence of the entry determines whether this option is inactive (DISABLE) or active (ENABLE).The option determines whether or not the aspect ratio height to width of the image must be corrected on the receiving station.

ASPECT_   Possible values: BILINEAR CUBIC
RATIO_INTERPOLATION=   Default value: BILINEAR
This parameter determines the pixel calculation of missing pixels.
Do not change it.

MAX_NAMEID_LENGTH =   Default value: 64; maximum value: 64
The maximum number of characters (sum of the characters from patient name, patient ID...) that can be transmitted to the receiving station.
With an existing receiving station with installed MagicView300 software, reduce the value to 63.

Section: [STORAGE_NODE_2]

This section must be changed in accordance with the information from the customer's system administrator..

NOTE	**In case certain settings cannot be specified by the customer's system administrator, proceed in accordance with the manufacturer's specifications.** **Information pertaining to the corresponding receiving stations is located on the SIEMENS Intranet.**

DESCRIPTION =

Default: Node_Name_2

[26] Name of the first receiving station. This name will be displayed on the Memoskop when calling up the contents of the hard disk (ALL PAT key) and as selection text when transferring images to a DICOM receiving station.
Maximum length: 20 characters
Valid characters: A..Z; a..z; 0..9 and _

Delete the default entry and enter the name of the second receiving station.
If the second receiving station is not used, then delete the default entry.

AE_TITLE =

Default: Storage_Node_2_AET

[27] User program name of the receiving station.

Delete the default entry and enter the application entity title of the second receiving station.
If the second receiving station is not used, then delete the default entry.

HOST_NAME =

Default: host_2

[28] Host name of the receiving station.

Delete the default entry and enter the host name of the second receiving station.
If the second receiving station is not used, then delete the default entry.

IP_ADDRESS =

Default: xxx.xxx.xxx.xxx

[29] The IP address of the receiving station.
Delete the default entry and enter the IP address of the second receiving station.
If the second receiving station is not used, then delete the default entry.

Do not enter leading zeros.
Example:
IP address specified =192.168.010.001:
Enter as = 192.168.10.1

PORT_NUM =	Default: 104
	[30] Port number of the network connection. Port number 104 has been set up as the standard for DICOM. If required, it may be changed.
ASPECT_ RATIO_CORRECTION=	Possible values: DISABLED ENABLED Default value: DISABLED Change to ENABLED. For this purpose, delete text "DISABLED" and re-insert after "ENABLED" (new text: ENABLED DISABLED). The sequence of the entry determines whether this option is inactive (DISABLE) or active (ENABLE).The option determines whether or not the aspect ratio height to width of the image must be corrected on the receiving station.
ASPECT_ RATIO_INTERPOLATION=	Possible values: BILINEAR CUBIC Default value: BILINEAR This parameter determines the pixel calculation of missing pixels. Do not change it.
MAX_NAMEID_LENGTH =	Default value: 64; maximum value: 64 The maximum number of characters (sum of the characters from patient name, patient ID...) that can be transmitted to the receiving station. With an existing receiving station with installed MagicView300 software, reduce the value to 63.

Section [STORAGE_NODE_3]

This section must be changed in accordance with the information from the customer's system administrator..

NOTE	**In case certain settings cannot be specified by the customer's system administrator, proceed in accordance with the manufacturer's specifications.** **Information pertaining to the corresponding receiving stations is located on the SIEMENS Intranet.**

DESCRIPTION =

Default: Node_Name_3

[31] Name of the first receiving station. This name will be displayed on the Memoskop when calling up the contents of the hard disk (ALL PAT key) and as selection text when transferring images to a DICOM receiving station.
Maximum length: 20 characters
Valid characters: A..Z; a..z; 0..9 and _

Delete the default entry and enter the name of the third receiving station.
If the third receiving station is not used, then delete the default entry.

AE_TITLE =

Default: Storage_Node_3_AET

[32] User program name of the receiving station.

Delete the default entry and enter the application entity title of the third receiving station.
If the third receiving station is not used, then delete the default entry.

HOST_NAME =

Default: host_3

[33] Host name of the receiving station.

Delete the default entry and enter the host name of the third receiving station.
If the third receiving station is not used, then delete the default entry.

IP_ADDRESS =

Default: xxx.xxx.xxx.xxx

[34] The IP address of the receiving station.
Delete the default entry and enter the IP address of the third receiving station.
If the third receiving station is not used, then delete the default entry.

Do not enter leading zeros.
Example:
IP address specified =192.168.010.001:
Enter as = 192.168.10.1

PORT_NUM =   Default: 104

[35] Port number of the network connection.
Port number 104 has been set as the standard for DICOM. If
required, this may be changed.

ASPECT_   Possible values: DISABLED ENABLED
RATIO_CORRECTION=   Default value: DISABLED
Change to ENABLED.
For this purpose, delete text "DISABLED" and re-insert after
"ENABLED" (new text: ENABLED DISABLED).
The sequence of the entry determines whether this option is
inactive (DISABLE) or active (ENABLE).The option deter-
mines whether or not the aspect ratio height to width of the
image must be corrected on the receiving station.

ASPECT_   Possible values: BILINEAR CUBIC
RATIO_INTERPOLATION=   Default value: BILINEAR
This parameter determines the pixel calculation of missing
pixels.
Do not change it.

MAX_NAMEID_LENGTH =   Default value: 64; maximum value: 64
The maximum number of characters (sum of the characters
from patient name, patient ID...) that can be transmitted to
the receiving station.
With an existing receiving station with installed
MagicView300 software, reduce the value to 63.

Section: [PRINT_NODE_1]

This section describes the settings for a printer station such as a laser camera with DICOM functionality.

NOTE	**In case certain settings cannot be specified by the customer's system administrator, proceed in accordance with the manufacturer's specifications.** **Information from the camera manufacturers is located on the SIEMENS Intranet.**

DESCRIPTION =

> Default: Printer_Name
>
> [40] Name of printer. This text will be displayed on the Memoskop when calling up the contents of the hard disk (ALL PAT key) and as selection text when transferring the images to a DICOM receiving station.
> Maximum length: 20 characters
> Valid characters: A..Z; a..z; 0..9 and _
>
> Delete the default entry and enter the name of the printer receiving station.
> If the printer receiving station is not used, e.g. because no DICOM printer is available in the network, then delete the default entry.

AE_TITLE =

> Default: Print_Node_AET
>
> [41] User program name of printer
>
> Delete the default entry and enter the application entity title of the printer receiving station.
> If the printer receiving station is not used, e.g. because no DICOM printer is available in the network, then delete the default entry.

HOST_NAME =

> Default: host_4
>
> [42] Host name of printer
>
> Delete the default entry and enter the host name of the printer receiving station.
> If the printer receiving station is not used, e.g. because no DICOM printer is available in the network, then delete the default entry.

IP_ADDRESS =

> Default: xxx.xxx.xxx.xxx
>
> [43] IP address of printer.
>
> Delete the default entry and enter the IP address of the printer receiving station.
> If the printer receiving station is not used, e.g. because no DICOM printer is available in the network, then delete the default entry.
> Do not enter leading zeros.
> Example:
> IP address specified =192.168.010.001:
> Enter as = 192.168.10.1

PORT_NUM =	default: 104
	[44] Port number of the network connection. Port number 104 is the standard for DICOM. If required, it may be changed.
2000,0030	Default: BLUE_FILM
(Medium Type)	[45] Settings possible: BLUE_FILM CLEAR_FILM PAPER <NONE> Selects the printer media to be used.
2010,0050	Default: 8INX10IN
(Film Format)	[46] Settings possible: 8INX10IN This setting specifies the size of the film. Other values should be taken from the corresponding DICOM Conformance statements for the printer.
2020,0020	default: NORMAL
(Polarity)	[47] Settings possible: NORMAL REVERSE NORMAL = Film result is the same as the monitor image. (Bone is dark). REVERSE = Film result is the same as X-ray film (Bone is white).
2010,0040	Default: LANDSCAPE
(Film Orientation	[48] Possible settings: PORTRAIT LANDSCAPE This setting specifies the desired film orientation (PORTRAIT = narrow side at the top , LANDSCAPE = long side at the top.
2010,0060	Default: CUBIC
(Magnification Type)	[49] Possible settings: NONE REPLICATE BILINEAR CUBIC Default setting: CUBIC This setting specifies the pixel calculations required for image magnification.
Other parameters: Change only if required.	
FILM_FORMAT =	Default: STANDARD\1,1
	Possible settings: STANDARD\ 1,1 STANDARD\ 2,2 STANDARD\ 2,3 STANDARD\ 3,3 STANDARD\4,5 This specifies the image formats for the printer.
NUMBER_COPIES =	Default: 1
	Possible settings: 1 through (value to MAX_NUMBER_COPIES) This setting specifies the number of copies of the images transferred to the printer.

MAX_NUMBER_COPIES =	Default: 99
	Possible settings: 1 through 99 This setting specifies the maximum number of copies of the images transferred to the printer.
COLLATION =	Default: DISABLED
	Possible settings: ENABLED DISABLED This setting specifies, whether multiple copies of the images of a scene transferred should be summarized and output on a single film or whether the sequence of images is not to be changed.
ASPECT_ RATIO_CORRECTION =	Default: DISABLED Possible values: DISABLED ENABLED Change to ENABLED. For this purpose, delete text "DISABLED" and re-insert after "ENABLED". (New text: ENABLED DISABLED). The option determines whether or not the aspect ratio height to width of the image to height and width of the film must be corrected.
ASPECT_ RATIO_INTERPOLATION	Default: BILINEAR Possible values: BILINEAR CUBIC This parameter determines the pixel calculation of missing pixels. Bilinear = Pixel calculation (line) CUBIC = Pixel calculation (area)
2000,0020	Default: MED
(Print Priority)	Possible settings: MED HIGH LOW Priority assigned to the printout of images.
2000,0040	Default: PROCESSOR MAGAZINE
(Film Destination)	Possible settings: PROCESSOR MAGAZINE<NONE> Indicates, whether the printer has a processor magazine available or not.
2000,0050 (Film Session Label)	Default: SIEMENS_SIREMOBIL_COMPACT Do not change this text.
2010,0080 (Smoothing Type)	Default: 140 Parameters to magnification type Under normal conditions, do not change this value.
2010,0100	Default: BLACK
(Border Density)	Possible settings: BLACK The optical density of the unexposed film edge can be changed here. Under normal conditions, do not change this value.

2010,0110 (Empty Image Density)	default: BLACK Possible settings: BLACK WHITE The optical density of a blank image (Image information = 0) BLACK = no image information generates black image content if there is no image information. WHITE = no image information generates white image content if there is no image information. Do not change this setting.
2010,0120 (Min Density)	Default: 20 The value corresponds to minimal optical density on the film multiplied by 100: Example: the value 20 corresponds approximately to an optical density of 0.2 on the exposed film. The value depends on the polarity used, the media used and the characteristic curve selected. Default values for released printers are included in the basic release information for printers released for DICOM Bridge.
2010,0130 (Max Density)	Default: 320 The value corresponds to the maximum optical density on the film, multiplied by 100. Example: the value 320 corresponds approximately to an optical density of 3.2 on the exposed film. The value depends on the polarity used, the media used and the characteristic curve selected. Default values are included in the basic release information on printers for the DICOM Bridge.
2010,0140 (Trim)	Default: NO Possible settings: NO YES The parameter indicates whether a border is generated around the image or not.

Section [WORKLIST_NODE]

This section describes the settings for the worklist station (transmitting / receiving station with Dicom Get Worklist function).

NOTE	**If certain settings cannot be named by the system administrator, proceed according to the specifications of the manufacturer.**

DESCRIPTION =

Default: Worklist_Node_Name

[51] Name of the first worklist station. The worklists are called up from this and transmitted to the DICOM Bridge.
Maximum length: 20 characters
Valid characters: A..Z; a..z; 0..9 and _

Delete the default entry and enter the name of the worklist station.
If the customer has not allocated a name, then the default entry does not need to be deleted.

AE_TITLE =

Default: Worklist_Node_AET

[52] User program name of the worklist station.

Delete the default entry and enter the application entity title of the worklist station.
If no worklist station is used, e.g. because the DICOM Get Worklist function is not required, then delete the default entry.

HOST_NAME =

Default: host_5

[53] Host name of the worklist station.

Delete the default entry and enter the host name of the worklist station.
If no worklist station is used, e.g. because the DICOM Get Worklist function is not required, then delete the default entry.

IP_ADDRESS =

Default: xxx.xxx.xxx.xxx

[54] The IP address of the worklist station.
Delete the default entry and enter the IP address of the worklist station.
If no worklist station is used, e.g. because the DICOM Get Worklist function is not required, then delete the default entry.
Do not enter the leading zeros.
Example: IP address specified = 192.168.010.001:
Enter as= 192.168.10.1

PORT_NUM =

Default: 104

[55] Port number of the network connection.
Port number 104 has been set as the standard for DICOM. If required, this may be changed.

MAX_WORKLIST_ENTRIES =   Default: 200; maximum value: 200
A maximum of 200 worklist entries can be transmitted from the worklist station to the DICOM Bridge.
If more than the configured number of data records is transmitted, then an error message is displayed.

File: Mergecom.app

The file: Mergecom.app contains the TCP/IP port number, the host name and the available receiving station services.

The data for every receiving station must be entered in this file. The data should be entered according to the information specified by the customer's system administrator.

The required sections are structured as follows:

[Storage_Node_1_AET]		# Place holder for AE_TITLE
PORT_NUMBER	= 104	#]The DICOM port (TCP/IP Port)
HOST_NAME	= host_1	#The host name of the receiving station.
SERVICE_LIST	= Storage_Service_List	# List of services.

Entries:

[STORAGE_NODE_1_AET]	[22] The STORAGE_NODE_1_AET section name is to be replaced by the user program name of the first receiving station. This entry is the same as the entry in the Bridge.ini file. section, [STORAGE_NODE_1], line AE_TITLE.
	If the first receiving station is not used, e.g. because only the print service of the DICOM Bridge is used, then the default entry does not need to be deleted.
PORT_NUMBER =	Default: 104
	[25] Port number of the network connection. Port number 104 has been set as the standard for DICOM. If required, this may be changed.
HOST_NAME =	[23] Host name of the receiving station. This entry is the same as the entry in the Bridge.ini file, section [STORAGE_NODE_1], line HOST_NAME. This name should be changed to correspond with the information from the network administrator.
	If the first receiving station is not used, e.g. because only the print service of the DICOM Bridge is used, then the default entry does not need to be deleted.
SERVICE_LIST =	List of services available for this receiving station. Do not change this setting.
[STORAGE_NODE_2_AET]	[27] The name of the STORAGE_NODE_2_AET section is to be replaced with the name of the user program of the second receiving station. This entry is the same as the entry in the Bridge.ini file, section [STORAGE_NODE_2], line AE_TITLE.
	If the second receiving station is not used, e.g. because only one receiving station is available, then the default entry does not need to be deleted.

PORT_NUMBER =	Default: 104
	[30] Port number of the network connection. Port number 104 has been set as the standard for DICOM. If required, this may be changed.
HOST_NAME =	Default: host_2
	[28] Host name for the receiving station.
	This entry is the same as the entry in the Bridge.ini file, section [STORAGE_NODE_2], line HOST_NAME. This name should be changed to correspond with the information provided by the network administrator.
	If the second receiving station is not used, e.g. because only one receiving station is available, then the default entry does not need to be deleted.
SERVICE_LIST =	List of services available for this receiving station. Do not change this setting.
[STORAGE_NODE_3_AET]	[32] The name of the STORAGE_NODE_3_AET section is to be replaced with the name of the user program of the third receiving station. This entry is the same as the entry in the Bridge.ini file, section [STORAGE_NODE_3], line AE_TITLE.
	If the third receiving station is not used, e.g. because only one receiving station is available, then the default entry does not need to be deleted.
PORT_NUMBER =	Default: 104
	[35] Port number of the network connection. Port number 104 has been set as the standard for DICOM. If required, this may be changed.
HOST_NAME =	Default: host_3
	[33] Host name of the receiving station. This entry is the same as the entry in the Bridge.ini file, section [STORAGE_NODE_2], line HOST_NAME. The name should be changed to correspond with the information provided by the customer's network administrator.
	If the third receiving station is not used, e.g. because only one receiving station is available, then the default entry does not need to be deleted.
SERVICE_LIST =	List of services possible for this receiving station. Do not change this setting.
[PRINT_NODE_AET]	[41] The name of the section PRINT_NODE_AET should be replaced by the program name of the first printer. This entry is the same as the entry in the Bridge.ini file, section [PRINT_NODE_1], line AE_TITLE.
	If the printer receiving station is not used, e.g. because no DICOM printer is used, then the default entry does not need to be deleted.

PORT_NUMBER =	Default: 104
	[44] Port number of the network connection. The port number 104 has been set as the standard for DICOM. If required, this may be changed.
HOST_NAME =	Default: host_4
	[42] Host name for the printer. This entry is the same as the entry in the Bridge. ini file, section [PRINT_NODE_1], line HOST_NAME. This should be changed to correspond with the information provided by the customer's network administrator.
	If the printer receiving station is not used, e.g. because no DICOM printer is used, then delete the default entry.
SERVICE_LIST =	List of services available for this receiving station. Do not change this setting.
[WORKLIST_NODE_AET]	[52] Replace the name of the WORKLIST_NODE_AET by the user program name of the worklist station. This entry is the same as the entry in the Bridge.cfg file, [WORKLIST_NODE] section, AE_TITLE line.
	If the no worklist station is used, e.g. because only the print service of the DICOM Bridge is used, then the default entry does not need to be deleted.
PORT_NUMBER =	Default: 104
	[55] Port number of the network connection. Port number 104 has been set as the standard for DICOM. If required, this may be changed.
HOST_NAME =	Default: host_5
	[53] Host name of the worklist station. This entry is the same as the entry in the Bridge.cfg file, [WORKLIST_NODE] section, HOST_NAME line. Change this according to the specifications of the network administrator.
	If the worklist station is not used, e.g. because no Get Worklist function is used, then delete the default entry.
SERVICE_LIST =	This is a reference to the list of the services which are possible with this printer receiving station. Do not change the entry.

File: Hosts

NOTE	**The icon for opening the "Hosts" files is on the desktop of the DICOM Bridge. Double-clicking on the icon displays a program selection dialog. Select the "Notepad" program and use it for editing the "Hosts" file.**

- Open the "Hosts" file and then the line "127.0.0.1 localhost" .

- For each receiving station, enter below a new line respectively:
  "IP address " "blank space" "HOST_NAME";
  where
  - The "IP address" [24] [29] [34] [43] [54] should be replaced by the IP address of the receiving station.
  - The "blank space" should be replaced with one or more blank spaces.
  - The "HOST_NAME"[23] [28] [33] [42] [53] should be replaced by the Host names of the receiving stations.

- The IP addresses [24] [29] [34] [43] [54] should be entered according to the information supplied by the customer's system administrator.
  Do not enter leading zeros.
  Example:
  IP address =192.168.010.001:
  Enter 192.168.10.1
  Refer also to the description of the Bridge.cfg file, section [STORAGE_NODE_1] to [STORAGE_NODE_3], [WORKLIST_NODE] and [PRINT_NODE_1] respectively, line IP_ADDRESS.

- The Host name [23] [28] [33] [42] [53] of the receiving station should be entered to correspond to the specifications of the customer's system administrator.
  Refer also to the description of the Bridge.cfg file, section [STORAGE_NODE_1] to [STORAGE_NODE_3], [WORKLIST_NODE] and [PRINT_NODE_1] respectively, line HOST_NAME.

File: Merge.ini

The Merge.ini file contains the initialization parameters for the Mergecom program which contains the DICOM functions of the DICOM Bridge.

Under normal conditions, this file does not need to be changed. For service purposes, you can enable error messages to be logged and stored at various levels.

Parameter description

ERROR_MESSAGES =	Default: File	Determines, how errors that occur are handled
Options:	OFF	No storage of error messages
	File	Store in the file, file under Parameter LOG_FILE.
	Screen	Output error messages on the (not available) screen
	Memory	Send error messages to the RAM in the DICOM Bridge.
LOG_FILE_SIZE	Default: 100	Establishes the size of the log file. If needed, this file can be changed. (To increase the size = increase the value.)
WARNING_MESSAGES =	Default: File	Determines, how information is handled. For available settings, refer to ERROR_MESSAGES
INFO_MESSAGES =	Default: File	Determines, how information is handled. For available settings, refer to ERROR_MESSAGES.
T1_MESSAGES =	Default: File	Determines, how Trace level1 information is handled. For available settings, refer to ERROR_MESSAGES.
T2_MESSAGES =	Default: File	Determines, how Trace level2 information is handled. For possible settings, refer to ERROR_MESSAGES.
T3_MESSAGES =	Default: File	Determines how Trace level3 information is handled. For possible settings, refer to ERROR_MESSAGES. (Association Negotiation).
T4_MESSAGES =	Default: File	Determines, how Trace level4 information is handled. For possible settings, refer to ERROR_MESSAGES.
T5_MESSAGES =	Default: File	Determines how Trace level5 information is handled. For possible settings, refer to ERROR_MESSAGES.
T6_MESSAGES =	Default: File	Determines how Trace level6 information is handled. For possible settings, refer to ERROR_MESSAGES.
T7_MESSAGES =	Default: File	Determines how Trace level7 information is handled. For possible settings, refer to ERROR_MESSAGES. (DICOM Command Messages)
T8_MESSAGES =	Default: File	Determines how Trace level8 information is handled. For possible settings, refer to ERROR_MESSAGES.
T9_MESSAGES =	Default: File	Determines how Trace level9 information is handled. For possible settings, refer to ERROR_MESSAGES (PDU data)

For troubleshooting, we recommend activating the Trace levels T3_MESSAGES, T7_MESSAGES and T9_MESSAGES by setting the respective parameters to: file. You can then evaluate the information entered in the file located under LOG_FILE.

File: Mergecom.pro

This file establishes the profile of the DICOM Bridge. Among other things, it contains time-out settings, which can be adjusted depending on how slow or overburdened network connections are. If timeout settings are changed in this file, then the corresponding settings must be changed in the Bridge.cfg file under "APPLICATION_TIMEOUT".

Under normal conditions, no other settings need to be changed.

Section [DUL_PARMS]

ARTIM_TIMEOUT =	Default 120, set a higher value if errors occur during the transfer. (Value in seconds).
ASSOC_REPLY_TIMEOUT =	Default 120, set a higher value if errors occur during the transfer. (Value in seconds).
RELEASE_TIMEOUT =	Default 120, set a higher value if errors occur during the transfer. (Value in seconds).
WRITE_TIMEOUT =	Default 120, set a higher value if errors occur during the transfer. (Value in seconds).
CONNECT_TIMEOUT =	Default 120, set a higher value if errors occur during the transfer. (Value in seconds).
INACTIVITY_TIMEOUT =	Default 120, set a higher value if errors occur during the transfer. (Value in seconds).

File: Merge.log

This file is generated by the Mergecom software package.
Messages and error messages are logged during program execution. The file can be read out for troubleshooting purposes. In cases of service questions to the USC or HSC, it is helpful to send along this file for evaluation purposes.

File: Bridge.log

The Bridge.log file is generated by the DICOM Bridge software.
Messages and error messages are logged during program execution. The file can be read out for troubleshooting purposes. In cases of service questions to the USC or HSC, it is helpful to send along this file for evaluation purposes.
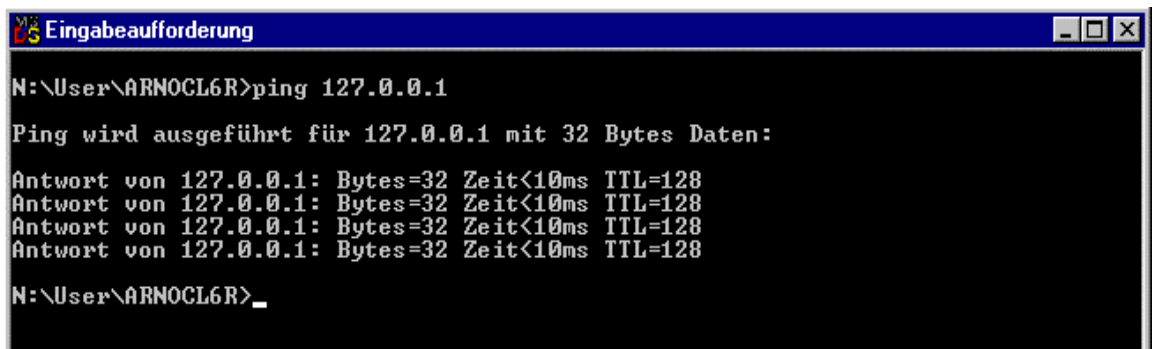
Restarting the DICOM Bridge

- Exit Windows NT on the DICOM Bridge.

- Switch the system off.

- Connect the network cable to the connection plate of the system monitor trolley.

- Switch the system back on and wait for it to initialize (~ 3 minutes!).
  The network and program settings will be transferred.

- The PCAnywhere program will automatically reconnect to the DICOM Bridge.
  If it does not, restart the PCAnywhere program on the service PC by double-clicking on
  the DIRECT icon (refer to chapter 3, fig. 17).

Checking the network connections

"Ping" the IP-address from DOS

- DICOM: open the MSDOS window in Windows.

- DICOM: check the basic functions of the network connection with the following
  command:
  - Enter the command "ping 'IP-Address'" in the DOS window.
    Enter the 'IP-address' of the receiving station you wish to test .
    e.g. if the IP-address of the first receiving station is '127.0.0.1', then enter the
    command "ping 127.0.0.1" in the DOS window (this IP-address is for the
    DICOM Bridge and is only used here as an example).
  - Then press the return key.
    You will normally receive a message similar to the following:


```
N:\User\ARNOCL6R>ping 127.0.0.1

Ping wird ausgeführt für 127.0.0.1 mit 32 Bytes Daten:

Antwort von 127.0.0.1: Bytes=32 Zeit<10ms TTL=128
Antwort von 127.0.0.1: Bytes=32 Zeit<10ms TTL=128
Antwort von 127.0.0.1: Bytes=32 Zeit<10ms TTL=128
Antwort von 127.0.0.1: Bytes=32 Zeit<10ms TTL=128

N:\User\ARNOCL6R>_
```

Fig. 1

- DICOM: If you receive an error message, check the files previously edited.

- DICOM: If all data entered was correct and you cannot establish a network connection,
  contact the customer's system administrator.

"Ping" the Host name from DOS

- DICOM: If no error in the network connection occurs on any of the receiving stations then
  enter the command "ping 'Hostname'" in the DOS window;
  use the network name of the receiving station being tested for the 'Hostname.'
  This allows you to check the answerback triggering, i.e., whether the receiving station
  can be contacted and responds via its Hostname.
  E.g. if the Hostname of the first receiving station is 'localhost' , enter "ping localhost" in
  the DOS window.

- Then press the 'Return' key.
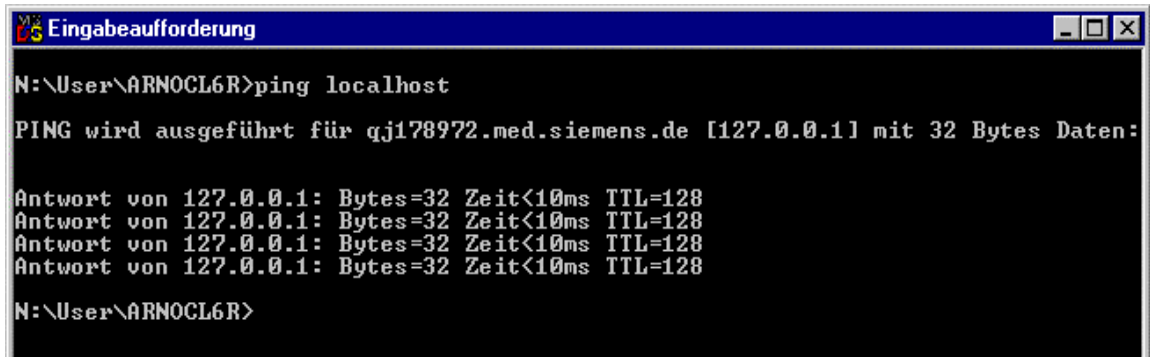 Under normal conditions, you will receive a message similar to the following:

Fig. 2

- If you receive an error message, check the files previously edited.
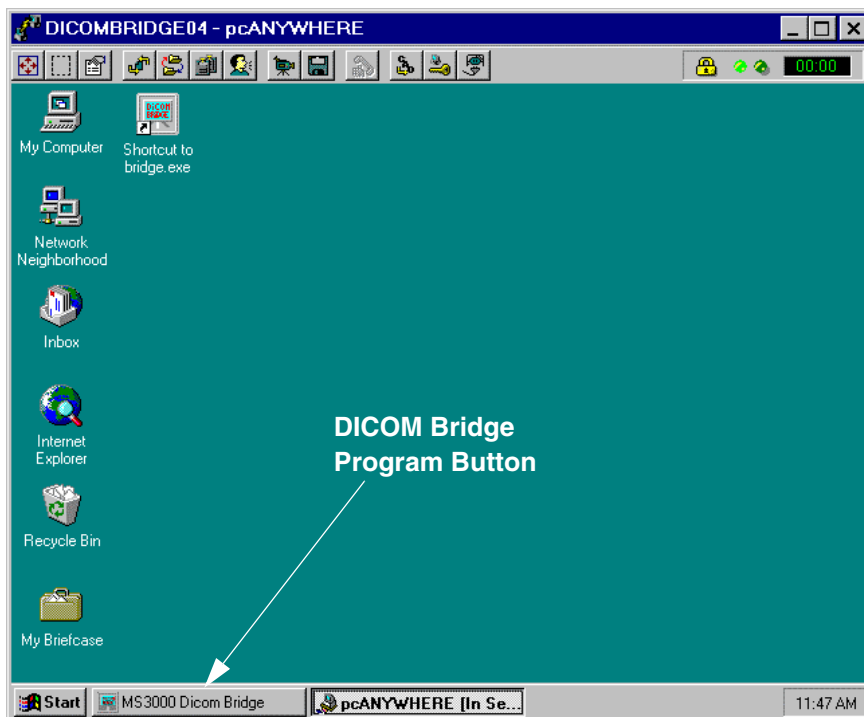
Using the Mc3echo command

Fig. 3

Prerequisites: Exit the DICOM Bridge program.
The receiving station must be in operation.

NOTE	**Observe uppercase - lowercase characters!**
	If an error message appears, repeat the command several times.

DICOM: Click on the "MS3000 DICOM Bridge button and exit the program.
(Refer to Fig. 3)

- DICOM: Open a DOS window.

- Change to the directory c:\bridge by entering "cd c:\bridge" .

- Enter the command "mc3echo 'AE_TITLE' ". Replace 'AE_TITLE' [22] [27] [32] [41] [52] with the AE_TITLE of the corresponding receiving station.

- DICOM: A message will be displayed if the transmission was successful.

- DICOM: Repeat the test with all receiving stations.

- DICOM: Close the DOS window.

- DICOM: Then restart the MS3000 DICOM Bridge software by double-clicking the "Bridge.exe" icon.

Checking image data transfer

- Press the ALLPAT key on the Memoskop.
  The patient directory will be displayed.

- If there is no patient directory, call up test images and save them under a patient name.

- With the cursor, select a patient directory with approximately three images. Start the transfer to the first receiving station and wait for the transfer to end.

- Check the images after transfer to the receiving station is complete.

- Afterward, start the data transfer of images to the other receiving stations in the same way and check the images received.

Checking the worklist data transmission

NOTE	**This can be performed only if a worklist has already been created for this system in consultation with the customer.**

- Open the Memoskop User Setup (CTRL + U). The User menu is displayed on the system monitor.

- Select menu "P" (worklist matching parameter). The menu shown in Fig. 4 is displayed on the system monitor

NOTE	**This menu is used to restrict the transferred worklist data. If all input fields are left empty, all worklist data will be transferred from the worklist station to the DICOM Bridge and Memoskop.**

```
        Worklist Matching Parameters
1.Scheduled station AE title :
                     XXXXXXXXXXXXXXXX
2.Station Name.....: XXXXXXXXXXXXXXXX
3.Modality.........: XXXXXXXXXXXXXXXX
4.Date Start.......: XX-XX-XXXX
5.Date Stop........: XX-XX-XXXX
6.Time Start.......: XX:XX
7.Time Stop........: XX:XX

 Press >|< to exit
 Press <-| to confirm
 Enter selection:_
```

Fig. 4

- Ask the customer for the matching parameters and enter them in the corresponding lines.

- Change to the next line in each case with the return key.

- Then exit the menu of Fig. 4 by pressing the Home key several times.

- On the Memoskop press the "NEXT PAT" key and then "ALL PAT".

- The query of the worklist from the worklist station is started and the data are transferred to the system. A line with the transferred patient data is displayed in each case in the patient folder. The required line can be selected using the cursor keys and then accepted by pressing the return key.

Image quality test

- Store the SMPTE test pattern under a patient name and send it to all receiving stations configured. For receiving stations with monitors, the monitor brightness and contrast must be adjustable so that the 5% fields of the SMPTE test pattern can be differentiated.

- Make sure the SMPTE test pattern for optimizing image quality is available to the manufacturer of the printer.

Concluding work

- Reinstall all the covers.

- Perform the protective conductor test according to ARTD-002.731.17.

- Perform a system function test.

- These instructions are to be used for service of the DICOM Bridge as well. File these instructions in the "Service" Register in the system binder.

DICOM Bridge

- In case you cannot connect to the DICOM Bridge using the PCAnywhere program, you can temporarily connect a standard VGA monitor and a standard PC keyboard for troubleshooting.

- If there are problems with the operating system, the complete DICOM Bridge should be replaced.

Network connection

- When performing service work, inspect the network connections as described in chapter 6.

- Check the network cables and the plugs/receptacles as well.

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Chap. 0	Cover, revision level, table of contents changed	
Chap. 3	POWERMOBIL / ARCOSKOP worklist functionality added	
Chap. 5	POWERMOBIL / ARCOSKOP worklist functionality added	
Chap. 6	POWERMOBIL / ARCOSKOP worklist functionality added	

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